

Kathleen Fuller 45089

Access DB# \_\_\_\_\_

## SEARCH REQUEST FORM

### Scientific and Technical Information Center

Requester's Full Name: Rebecca Cook Examiner #: 69826 Date: 6/19/01  
Art Unit: 1614 Phone Number 308 4724 Serial Number: 091825896  
Mail Box and Bldg/Room Location: CMA Results Format Preferred (circle): PAPER DISK E-MAIL  
2307

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: \_\_\_\_\_

Inventors (please provide full names): Joseph Steiner

Earliest Priority Filing Date: 6/14/97

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search compound of formula I (cl 6)  
to grow hair, treat alopecia

Also provide structures of each compound of

Claim 8

Thanks  
Rebecca

STAFF USE ONLY		Type of Search	Vendors and cost where applicable
Searcher:	<u>K. Fuller</u>	NA Sequence (#)	STN _____
Searcher Phone #:	_____	AA Sequence (#)	Dialog _____
Searcher Location:	_____	Structure (#)	Questel/Orbit _____
Date Searcher Picked Up:	_____	Bibliographic	Dr. Link _____
Date Completed:	<u>6/26/01</u>	Litigation	Lexis/Nexis _____
Searcher Prep & Review Time:	<u>30</u>	Fulltext	Sequence Systems _____
Clerical Prep Time:	_____	Patent Family	WWW/Internet _____
Online Time:	<u>37</u>	Other	Other (specify) _____

=> file reg

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STRUCTURE FILE UPDATES: 25 JUN 2001 HIGHEST RN 343304-93-8  
DICTIONARY FILE UPDATES: 25 JUN 2001 HIGHEST RN 343304-93-8

TSCA INFORMATION NOW CURRENT THROUGH January 11, 2001

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FILE COVERS 1947 - 26 Jun 2001 VOL 135 ISS 1  
FILE LAST UPDATED: 25 Jun 2001 (20010625/ED)

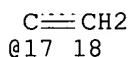
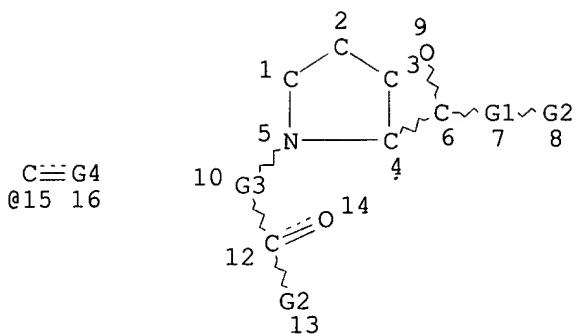
This file contains CAS Registry Numbers for easy and accurate  
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published in CA from 1947 to 1966.

=> d que

L6 STR



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VAR G1=O/N
VAR G2=AK/CY
VAR G3=CH2/17/15
VAR G4=O/S
NODE ATTRIBUTES:
CONNECT IS E1 RC AT 9
CONNECT IS E1 RC AT 14
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

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GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 17

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STEREO ATTRIBUTES: NONE
L8      391 SEA FILE=REGISTRY SSS FUL L6
L9      165 SEA FILE=HCAPLUS ABB=ON L8
L10     12 SEA FILE=HCAPLUS ABB=ON L9 AND HAIR

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=> s 19 and ?alopec?

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16864 ?ALOPE?
L11     12 L9 AND ?ALOPE?

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=> s 110 or 111

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L12     14 L10 OR L11

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=> sel hit rn 112 1-14

E1 THROUGH E67 ASSIGNED

=> d 112 all 1-14 hitstr

391 structures from  
this query.

This query covers  
all the compounds  
in claim 8. If they  
are not shown with  
one of the CA references  
then they are not  
indexed by CA.

14 CA references with hair or  
? alopec?

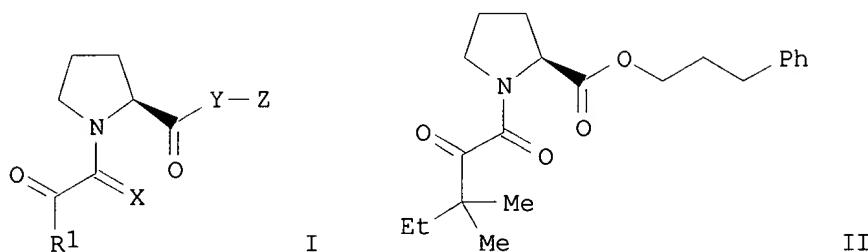
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L12 ANSWER 1 OF 14 HCAPLUS COPYRIGHT 2001 ACS
AN 2001:57226 HCAPLUS
DN 134:115847
TI Pyrrolidine derivatives, hair growth compositions containing
them, and uses
IN Steiner, Joseph P.; Hamilton, Gregory S.
PA Gpi Nil Holdings, Inc., USA
SO U.S., 22 pp., Cont.-in-part of U.S. 5,945,441.

```

CODEN: USXXAM  
DT Patent  
LA English  
IC ICM A61K031-40  
NCL 514422000  
CC 27-10 (Heterocyclic Compounds (One Hetero Atom))  
Section cross-reference(s): 1, 34, 62, 63

SEARCH CLASSIFICATION(S) : 1, 31, 32, 33					
FAN.CNT 6					
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6177455	B1	20010123	US 1998-89415	199801
	US 5945441	A	19990831	US 1997-869426	199708
	ZA 9804621	A	19981204	ZA 1998-4621	199808
	ZA 9804778	A	19981204	ZA 1998-4778	199808
	ZA 9804783	A	19981204	ZA 1998-4783	199808
	US 6239164	B1	20010529	US 1999-369860	199905
PRAI	US 1997-869426	A2	19970604		
OS	MARPAT	134:115847			
GI					



AB The invention discloses methods for treating **alopecia** and promoting **hair** growth using certain pyrrolidine derivs. In particular, methods involving compds. I [R1 = (un)substituted (cyclo)alkyl, (cyclo)alkenyl, or Ar1; Ar1 = (un)substituted naphthyl, 2-indolyl, 3-indolyl, furyl, thiienyl, pyridyl; X = O, S, CH<sub>2</sub>, H<sub>2</sub>; Y = O, NR<sub>2</sub>; R2 = H, alkyl; Z = (un)substituted alkyl or alkenyl, -CH(R3)COX<sub>2</sub>R4; R3 = alkyl (un)substituted by cycloalkyl or Ar1; X<sub>2</sub> = O, NR<sub>5</sub>; R4 = Ph, CH<sub>2</sub>Ph, alkyl, alkenyl, phenylalk(en)yl; R5 = H, alk(en)yl] and related compds. are claimed. Approx. 30 synthesized examples are given, and use of these and addnl. members is claimed. For instance, L-proline Me ester HCl was amidated with Me oxalyl chloride (88%), subjected to Grignard reaction with EtMe<sub>2</sub>CMgCl (75%), hydrolyzed with LiOH in aq. MeOH (87%), and reesterified with PhCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OH (80%), to give title compd. II. Exptl. application of I to shaved mice gave dramatic **hair**

regrowth in comparison to controls, as demonstrated in attached photographs. A variety of lotions, shampoos, etc., are described. A lotion contained EtOH 80.0, invention compd. 10.0, .alpha.-tocopherol acetate 0.01, hardened castor oil-ethylene oxide adducts 0.5, and water 9.0% and perfume and dye qs.

ST hair growth pyrrolidine deriv prep; alopecia treatment proline deriv prep

IT Proteins, specific or class

RL: BSU (Biological study, unclassified); BIOL (Biological study) (FKBP (FK 506-binding protein), compds. with affinity for FKBP-type immunophilins; prepn. and use of hair growth compns. contg. pyrrolidine derivs.)

IT Proteins, specific or class

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(FKBP-12 (FK 506-binding protein, 12,000-mol.-wt.), compds. with

affinity for FKBP-type immunophilins; prepn. and use of hair growth compns. contg. pyrrolidine derivs.)

IT Immunophilins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (compds. with affinity for FKBP-type immunophilins; prepn. and use of hair growth compns. contg. pyrrolidine derivs.)

IT Hair preparations

(growth stimulants; prepn. and use of hair growth compns. contg. pyrrolidine derivs.)

IT Hair preparations

(lotions; prepn. and use of hair growth compns. contg. pyrrolidine derivs.)

IT Alopecia

(prepn. and use of hair growth compns. contg. pyrrolidine derivs.)

IT 20329-96-8P 30273-62-2P 53560-26-2P 139419-63-9P

**186268-77-9P** 186268-78-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation) (intermediate; prepn. and use of hair growth compns. contg. pyrrolidine derivs.)

IT **186268-50-8P** **186268-52-0P** **186268-56-4P**

**186268-57-5P** **186268-59-7P** **186268-60-0P**

**186268-62-2P** **186268-63-3P** **186268-64-4P**

**186268-65-5P** **186268-66-6P** **186268-67-7P**

**186268-68-8P** **186268-69-9P** **186268-70-2P**

**186268-71-3P** **186268-72-4P** **186268-73-5P**

**186268-74-6P** **186268-75-7P** **186268-76-8P**

**186452-05-1P** **186452-06-2P** **186452-09-5P**

**186452-10-8P** **186452-11-9P** **186452-12-0P**

**186452-14-2P** **186452-15-3P** **186452-16-4P**

**186452-17-5P** **186452-18-6P** **186452-19-7P**

**186452-20-0P** **186452-22-2P** **186452-23-3P**

**186452-25-5P** **217308-36-6P** **217308-37-7P**

**217308-39-9P** **217308-40-2P** **217308-43-5P**

**217308-44-6P** **217308-48-0P**

RL: BAC (Biological activity or effector, except adverse); BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. and use of hair growth compns. contg. pyrrolidine derivs.)

IT 86-81-7 122-97-4, 3-Phenyl-1-propanol 2133-40-6 2605-67-6

RL: RCT (Reactant)

(starting material; prepn. and use of hair growth compns. contg. pyrrolidine derivs.)

RE.CNT 89

RE

- (1) Anon; DE 2505114 1976 HCPLUS
- (2) Anon; EP 12401 1980 HCPLUS
- (3) Anon; EP 48159 1982 HCPLUS
- (4) Anon; EP 50800 1982 HCPLUS
- (5) Anon; EP 73143 1983 HCPLUS
- (6) Anon; EP 88350 1983 HCPLUS
- (7) Anon; EP 196841 1986 HCPLUS
- (8) Anon; DE 3508251 1986 HCPLUS
- (9) Anon; EP 260118 1988 HCPLUS
- (10) Anon; WO 8800040 1988 HCPLUS
- (11) Anon; WO 8809789 1988 HCPLUS
- (12) Anon; EP 333174 1989 HCPLUS
- (13) Anon; WO 8906234 1989 HCPLUS
- (14) Anon; EP 0420707 1990 HCPLUS
- (15) Anon; EP 0471135 1990 HCPLUS
- (16) Anon; EP 352000 1990 HCPLUS
- (17) Anon; EP 378318 1990 HCPLUS
- (18) Anon; DE 3931051 1990 HCPLUS

(19) Anon; WO 9012805 1990 HCAPLUS  
(20) Anon; EP 0443983 1991 HCAPLUS  
(21) Anon; EP 0494005 1991 HCAPLUS  
(22) Anon; DE 4015255 1991 HCAPLUS  
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(26) Anon; WO 9104985 1991 HCAPLUS  
(27) Anon; WO 9113088 1991 HCAPLUS  
(28) Anon; JP 04149166 1992 HCAPLUS  
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(32) Anon; WO 9200278 1992 HCAPLUS  
(33) Anon; WO 9203472 1992 HCAPLUS  
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(36) Anon; WO 9218478 1992 HCAPLUS  
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(44) Anon; WO 9314072 1993 HCAPLUS  
(45) Anon; EP 652229 1995 HCAPLUS  
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(47) Armistead; US 5192773 1993 HCAPLUS  
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(53) Connell; US 5385918 1995 HCAPLUS  
(54) Davis; US 5292747 1994 HCAPLUS  
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(56) Gavras; US 4574079 1986 HCAPLUS  
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(65) Harris; US 4374829 1983 HCAPLUS  
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(67) Hewitt; US 4996193 1991 HCAPLUS  
(68) Krapcho; US 4310461 1982 HCAPLUS  
(69) Krapcho; US 4390695 1983 HCAPLUS  
(70) Krapcho; US 4578474 1986 HCAPLUS  
(71) Luly; US 5457111 1995 HCAPLUS  
(72) Michnick; US 5470878 1995 HCAPLUS  
(73) Nelson; US 5385908 1995 HCAPLUS  
(74) Norton; US 5506228 1996 HCAPLUS  
(75) Ok; US 5208241 1993 HCAPLUS  
(76) Organ; US 5284877 1994 HCAPLUS  
(77) Procton; US 5472687 1995 HCAPLUS  
(78) Proctor; US 5714510 1998 HCAPLUS  
(79) Rinehart; US 5294603 1994 HCAPLUS  
(80) Rupprecht; US 5284840 1994 HCAPLUS  
(81) Schreiber; US 5447915 1995 HCAPLUS  
(82) Shanklin; US 4593102 1986 HCAPLUS

- (83) Sharpe; US 5631017 1997  
 (84) Sharpe; US 5703088 1997 HCPLUS  
 (85) Shimano; US 4531964 1985 HCPLUS  
 (86) Skotnicki; US 5252579 1993 HCPLUS  
 (87) Takeuchi; US 5359138 1994 HCPLUS  
 (88) Winkley; US 4438031 1984 HCPLUS  
 (89) Zelle; US 5543423 1996 HCPLUS

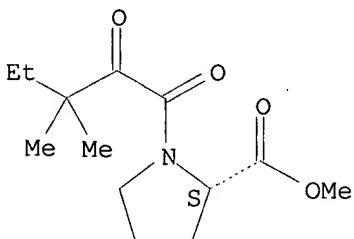
IT 186268-77-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (intermediate; prepn. and use of hair growth compns. contg.  
 pyrrolidine derivs.)

RN 186268-77-9 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, methyl ester (9CI) (CA  
 INDEX NAME)

Absolute stereochemistry.



- IT 186268-50-8P 186268-52-0P 186268-56-4P  
 186268-57-5P 186268-59-7P 186268-60-0P  
 186268-62-2P 186268-63-3P 186268-64-4P  
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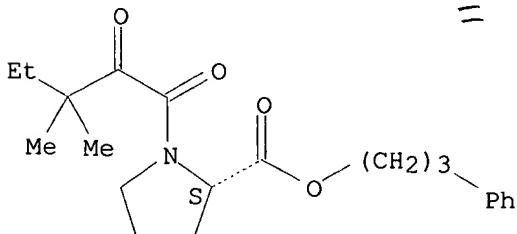
RL: BAC (Biological activity or effector, except adverse); BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (prepn. and use of hair growth compns. contg. pyrrolidine derivs.)

RN 186268-50-8 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-phenylpropyl ester (9CI)  
 (CA INDEX NAME)

Absolute stereochemistry.

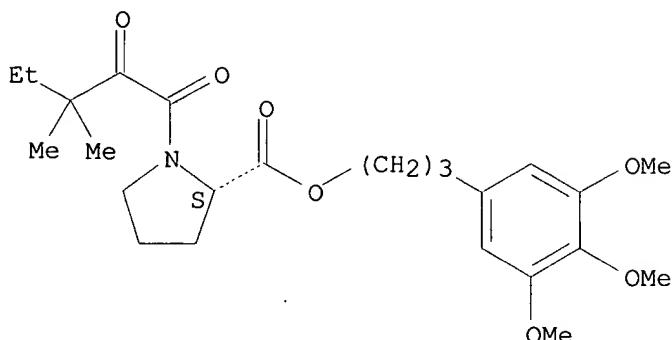
*1st compound of claim 8*  
 $\text{3-phenyl-1-propyl (2S)-1-}$   
 $\text{(3,3-dimethyl-1,2-dioxopentyl)}$   
 $\text{-2-pyrrolidine carboxylate}$



RN 186268-52-0 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3,4,5-trimethoxyphenyl)propyl ester (9CI) (CA INDEX NAME)

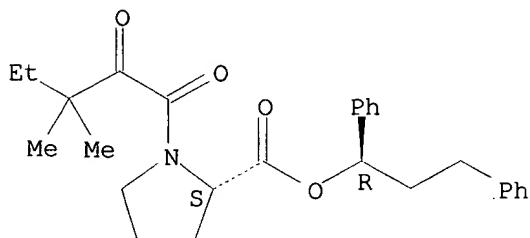
Absolute stereochemistry.



RN 186268-56-4 HCPLUS

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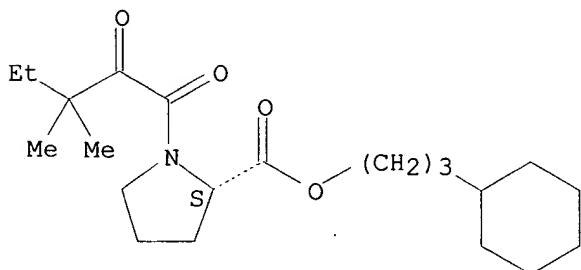
Absolute stereochemistry.



RN 186268-57-5 HCPLUS

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Absolute stereochemistry.

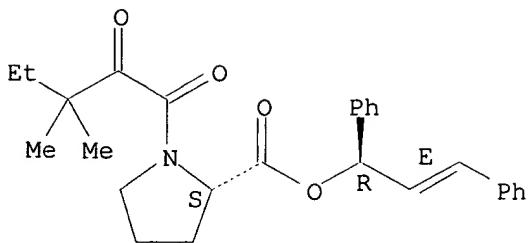


RN 186268-59-7 HCPLUS

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Absolute stereochemistry.

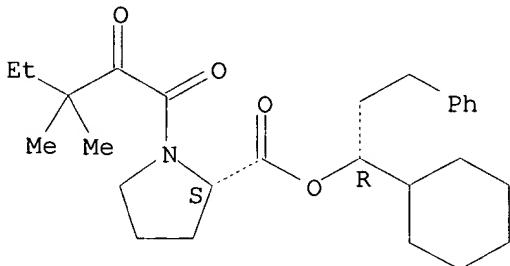
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RN 186268-60-0 HCPLUS

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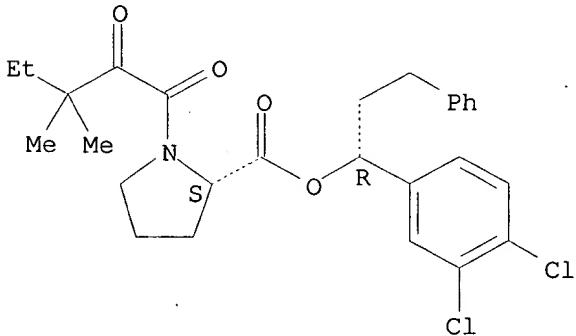
Absolute stereochemistry.



RN 186268-62-2 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1R)-1-(3,4-dichlorophenyl)-3-phenylpropyl ester (9CI) (CA INDEX NAME)

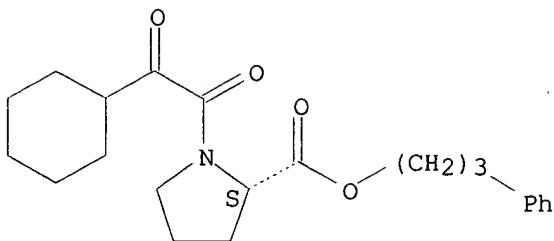
Absolute stereochemistry.



RN 186268-63-3 HCPLUS

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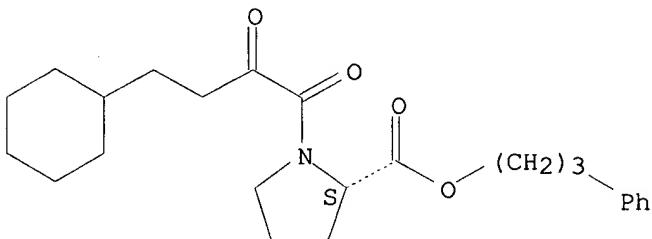
Absolute stereochemistry.



RN 186268-64-4 HCPLUS

CN L-Proline, 1-(4-cyclohexyl-1,2-dioxobutyl)-, 3-phenylpropyl ester (9CI)  
(CA INDEX NAME)

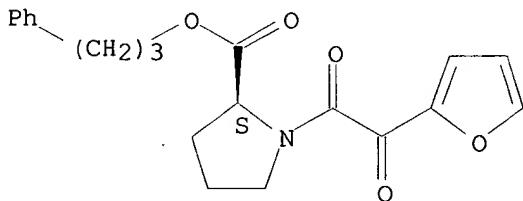
Absolute stereochemistry.



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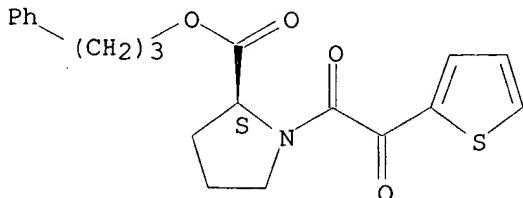
Absolute stereochemistry.



RN 186268-66-6 HCPLUS

CN L-Proline, 1-(oxo-2-thienylacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

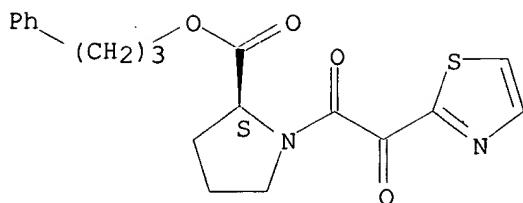


RN 186268-67-7 HCPLUS

CN L-Proline, 1-(oxo-2-thiazolylacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

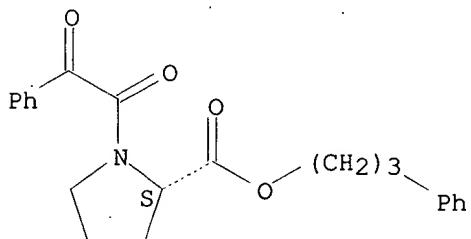
KATHLEEN FULLER EIC1700 308-4290



RN 186268-68-8 HCAPLUS

CN L-Proline, 1-(oxophenylacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

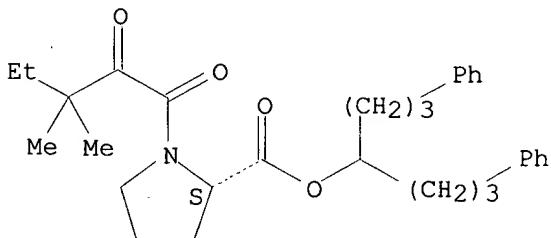
Absolute stereochemistry.



RN 186268-69-9 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 4-phenyl-1-(3-phenylpropyl)butyl ester (9CI) (CA INDEX NAME)

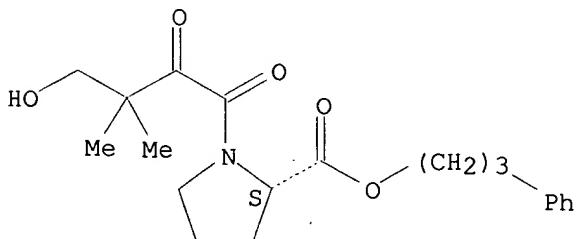
Absolute stereochemistry.



RN 186268-70-2 HCAPLUS

CN L-Proline, 1-(4-hydroxy-3,3-dimethyl-1,2-dioxobutyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

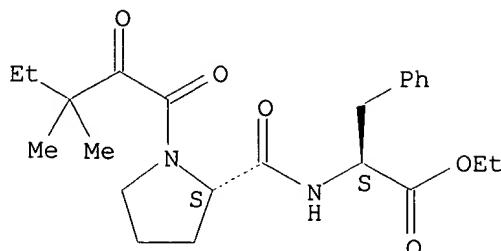
Absolute stereochemistry.



RN 186268-71-3 HCAPLUS

CN L-Phenylalanine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, ethyl ester (9CI) (CA INDEX NAME)

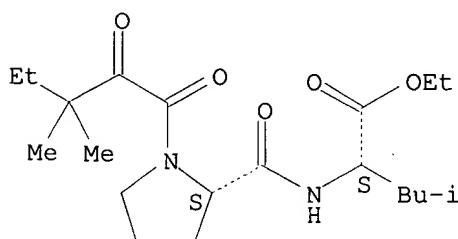
Absolute stereochemistry.



RN 186268-72-4 HCPLUS

CN L-Leucine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, ethyl ester (9CI)  
(CA INDEX NAME)

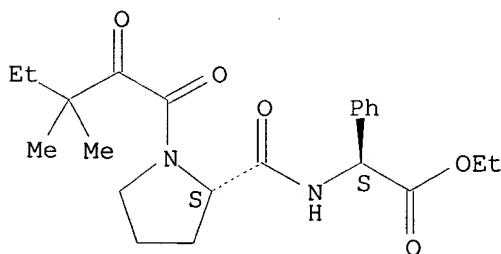
Absolute stereochemistry.



RN 186268-73-5 HCPLUS

CN Glycine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-2-phenyl-, ethyl ester,  
(2S)- (9CI) (CA INDEX NAME)

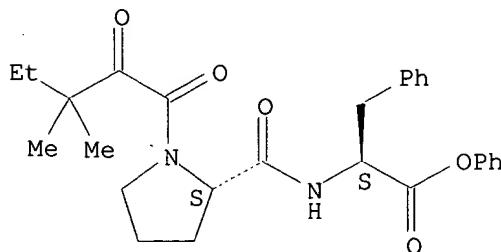
Absolute stereochemistry.



RN 186268-74-6 HCPLUS

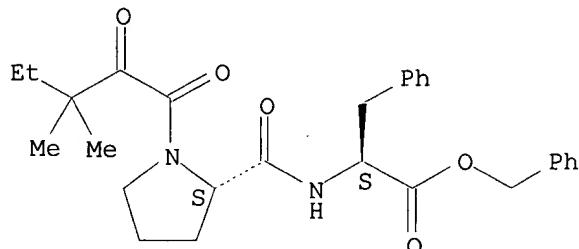
CN L-Phenylalanine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, phenyl ester  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



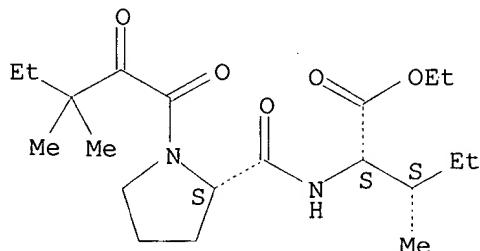
RN 186268-75-7 HCAPLUS  
 CN L-Phenylalanine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, phenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



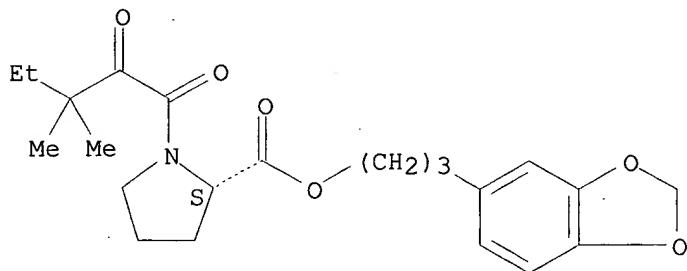
RN 186268-76-8 HCAPLUS  
 CN L-Isoleucine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



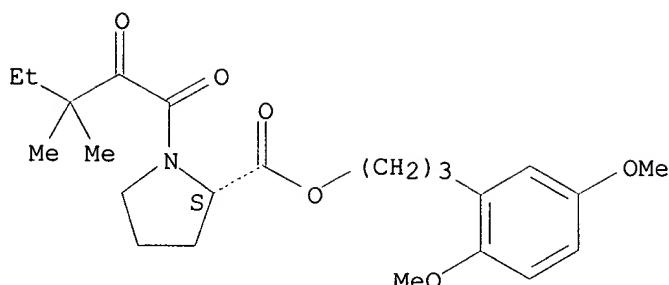
RN 186452-05-1 HCAPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(1,3-benzodioxol-5-yl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 186452-06-2 HCAPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(2,5-dimethoxyphenyl)propyl ester (9CI) (CA INDEX NAME)

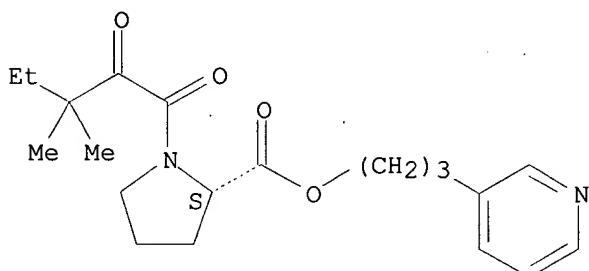
Absolute stereochemistry.



RN 186452-09-5 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3-pyridinyl)propyl ester  
(9CI) (CA INDEX NAME)

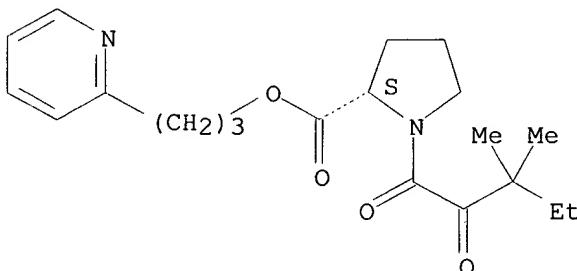
Absolute stereochemistry.



RN 186452-10-8 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(2-pyridinyl)propyl ester  
(9CI) (CA INDEX NAME)

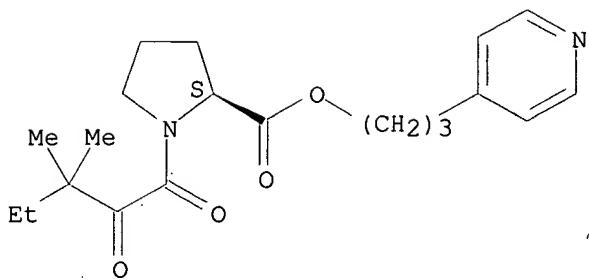
Absolute stereochemistry.



RN 186452-11-9 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(4-pyridinyl)propyl ester  
(9CI) (CA INDEX NAME)

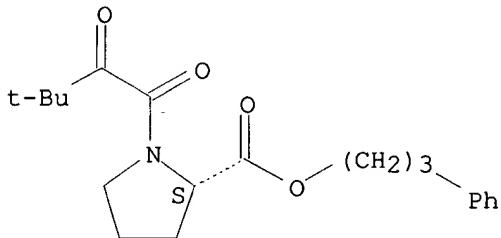
Absolute stereochemistry.



RN 186452-12-0 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxobutyl)-, 3-phenylpropyl ester (9CI)  
(CA INDEX NAME)

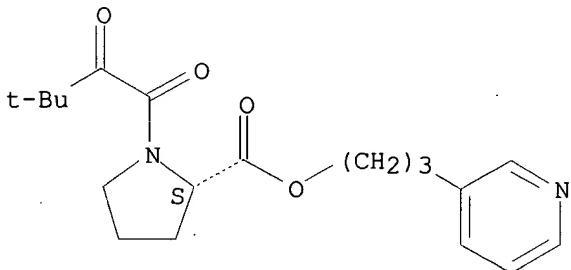
Absolute stereochemistry.



RN 186452-14-2 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxobutyl)-, 3-(3-pyridinyl)propyl ester  
(9CI) (CA INDEX NAME)

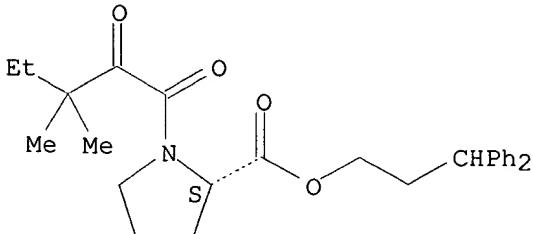
Absolute stereochemistry.



RN 186452-15-3 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3,3-diphenylpropyl ester  
(9CI) (CA INDEX NAME)

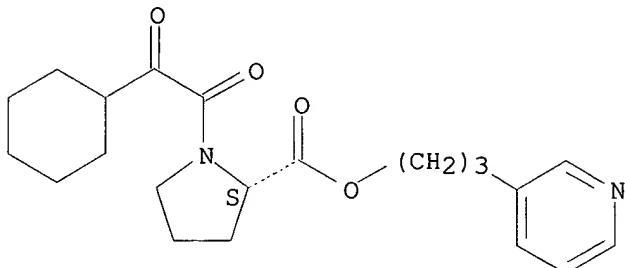
Absolute stereochemistry.



RN 186452-16-4 HCAPLUS

CN L-Proline, 1-(cyclohexyloxooacetyl)-, 3-(3-pyridinyl)propyl ester (9CI)  
(CA INDEX NAME)

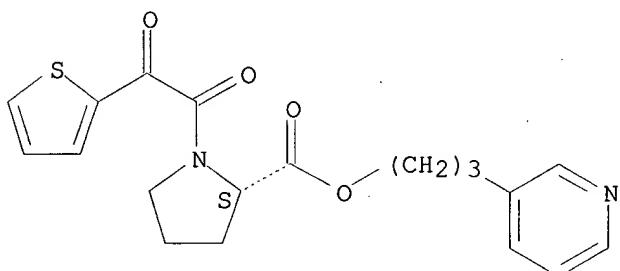
Absolute stereochemistry.



RN 186452-17-5 HCAPLUS

CN L-Proline, 1-(oxo-2-thienylacetyl)-, 3-(3-pyridinyl)propyl ester (9CI)  
(CA INDEX NAME)

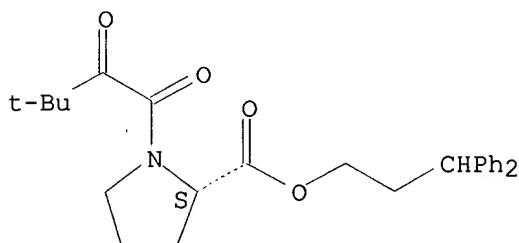
Absolute stereochemistry.



RN 186452-18-6 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxobutyl)-, 3,3-diphenylpropyl ester  
(9CI) (CA INDEX NAME)

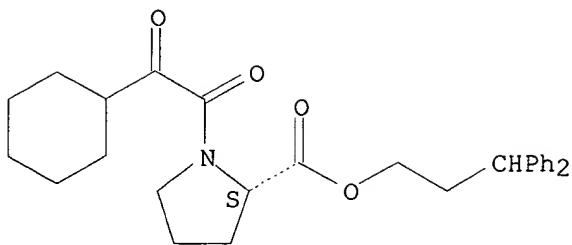
Absolute stereochemistry.



RN 186452-19-7 HCAPLUS

CN L-Proline, 1-(cyclohexyloxooacetyl)-, 3,3-diphenylpropyl ester (9CI) (CA  
INDEX NAME)

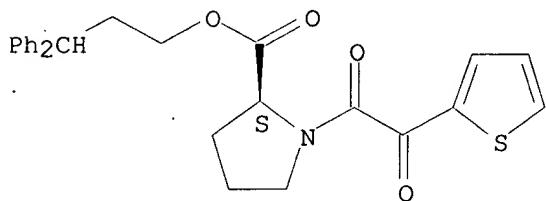
Absolute stereochemistry.



RN 186452-20-0 HCPLUS

CN L-Proline, 1-(oxo-2-thienylacetyl)-, 3,3-diphenylpropyl ester (9CI) (CA INDEX NAME)

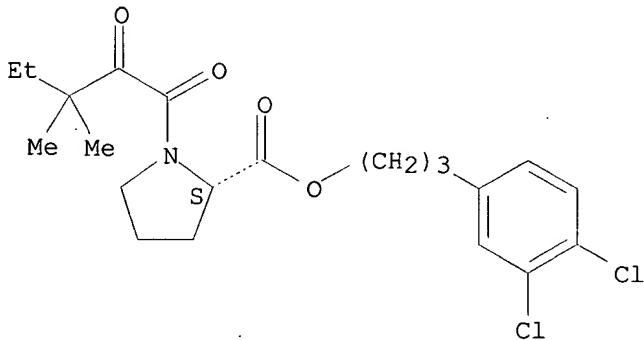
Absolute stereochemistry.



RN 186452-22-2 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3,4-dichlorophenyl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

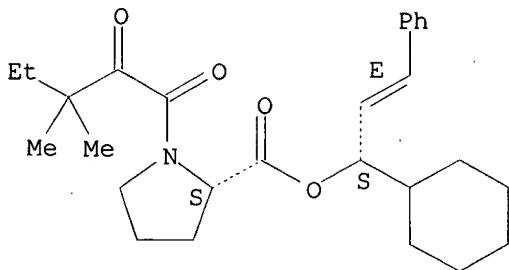


RN 186452-23-3 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1S,2E)-1-cyclohexyl-3-phenyl-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

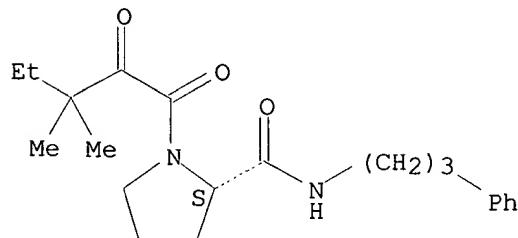
Double bond geometry as shown.



RN 186452-25-5 HCPLUS

CN 2-Pyrrolidinecarboxamide, 1-(3,3-dimethyl-1,2-dioxopentyl)-N-(3-phenylpropyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

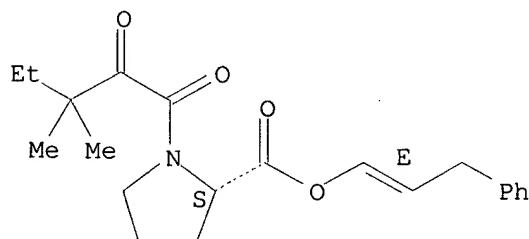


RN 217308-36-6 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1E)-3-phenyl-1-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

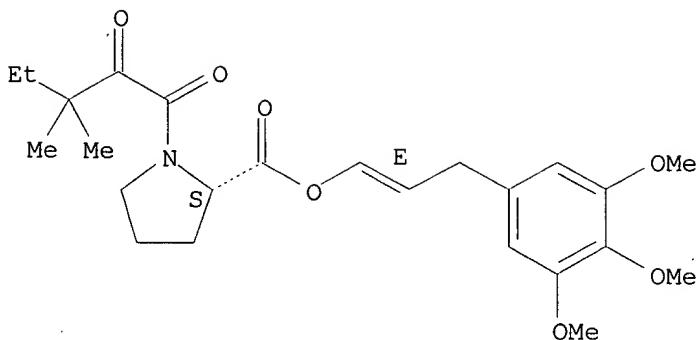


RN 217308-37-7 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1E)-3-(3,4,5-trimethoxyphenyl)-1-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

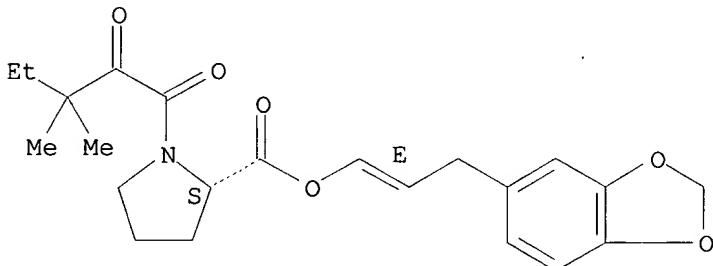


RN 217308-39-9 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1E)-3-(1,3-benzodioxol-5-yl)-1-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

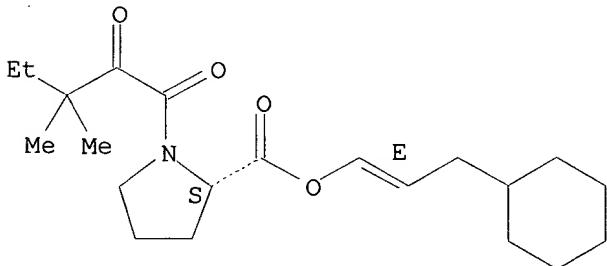


RN 217308-40-2 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1E)-3-cyclohexyl-1-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

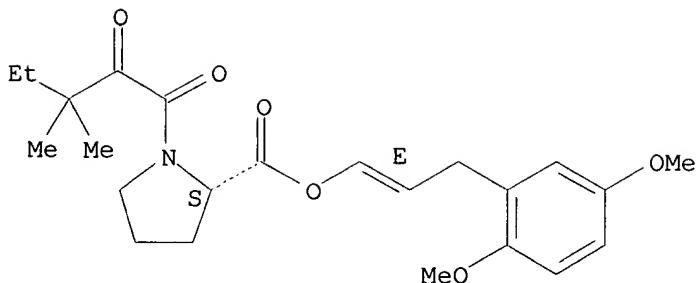


RN 217308-43-5 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1E)-3-(2,5-dimethoxyphenyl)-1-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

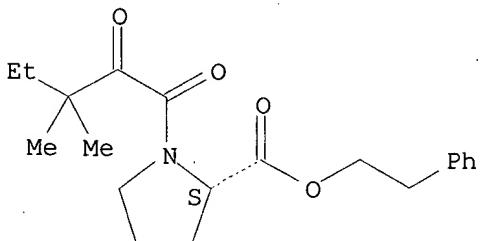
Double bond geometry as shown.



RN 217308-44-6 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 2-phenylethyl ester (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

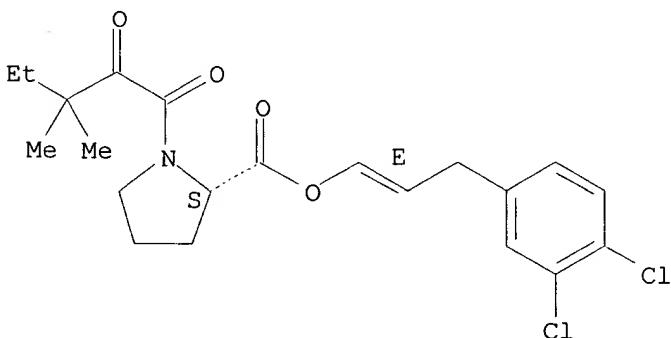


RN 217308-48-0 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1E)-3-(3,4-dichlorophenyl)-1-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



L12 ANSWER 2 OF 14 HCPLUS COPYRIGHT 2001 ACS

AN 2001:25779 HCPLUS

DN 134:86543

TI Preparation of pyridinyl N-acylprolinates and analogs as hair growth promoters

IN Steiner, Joseph P.; Hamilton, Gregory S.

PA GPI NIL Holding, Inc., USA

SO U.S., 24 pp.

CODEN: USXXAM

DT Patent

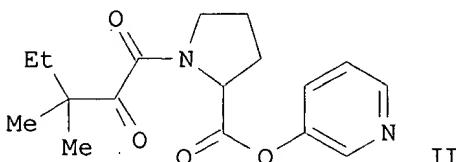
LA English

IC ICM A61K031-44

NCL 514339000  
 CC 34-2 (Amino Acids, Peptides, and Proteins)  
 Section cross-reference(s): 27, 62

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6172087	B1	20010109	US 1998-89830	19980603
OS	MARPAT 134:86543				
GI					



AB Title compds., e.g.,  $\text{RCOC}(:\text{W})\text{NACHBCOXYZ}$  [I; AB = atoms to complete an (un)substituted heterocyclic ring; R = (cyclo)alk(en)yl, (un)substituted (hetero)aryl; W = O, S, CH<sub>2</sub>, H<sub>2</sub>; X = O, NR<sub>1</sub>, S, CR<sub>1</sub> (sic), CR<sub>1</sub>R<sub>3</sub>; R<sub>1</sub>, R<sub>3</sub> = H, alk(en)yl, alkynyl, YZ; Y = bond, (un)substituted alk(en)ylene; Z = (N-oxido) pyridinyl, pyrimidinyl, (iso)quinolyl, etc.] were prep'd. Thus, Me L-proline was B-acylated by ClCOCO<sub>2</sub>Me and the product treated with EtCMe<sub>2</sub>MgCl to give, in 3 addnl. steps, title compd. (S)-II. Hair growth activity of I was demonstrated.

ST acylproline prep'n hair growth promoter

IT Hair preparations

(growth stimulants; pyridinyl N-acylprolinates and analogs)

IT 186452-09-5P 251956-60-2P

RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (prep'n. of pyridinyl N-acylprolinates and analogs as hair growth promoters)

IT 2577-48-2, L-Proline methyl ester 2859-67-8, 3-(3-Pyridinyl)-1-propanol  
 28276-08-6, 1,1-Dimethylpropylmagnesium chloride

RL: RCT (Reactant)

(prep'n. of pyridinyl N-acylprolinates and analogs as hair growth promoters)

IT 139419-63-9P 186268-77-9P 186268-78-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prep'n. of pyridinyl N-acylprolinates and analogs as hair growth promoters)

RE.CNT 72

RE

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- (2) Anon; EP 12401 1980 HCPLUS
- (3) Anon; EP 48159 1982 HCPLUS
- (4) Anon; EP 50800 1982 HCPLUS
- (5) Anon; EP 73143 1983 HCPLUS
- (6) Anon; EP 88350 1983 HCPLUS
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- (17) Anon; EP 0494005 1991 HCPLUS

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(19) Anon; EP 405994 1991 HCPLUS  
(20) Anon; EP 419049 1991 HCPLUS  
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(36) Gold; US 4818749 1989 HCPLUS  
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(58) Ok; US 5208241 1993 HCPLUS  
(59) Organ; US 5284877 1994 HCPLUS  
(60) Proctor; US 5472687 1995 HCPLUS  
(61) Proctor; US 5714510 1998 HCPLUS  
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(63) Rupprecht; US 5284840 1994 HCPLUS  
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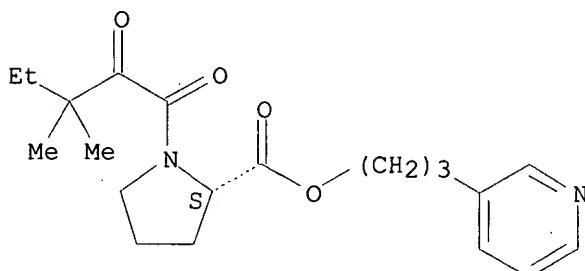
IT 186452-09-5P 251956-60-2P

RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. of pyridinyl N-acylprolinates and analogs as hair growth promoters)

RN 186452-09-5 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3-pyridinyl)propyl ester  
(9CI) (CA INDEX NAME)

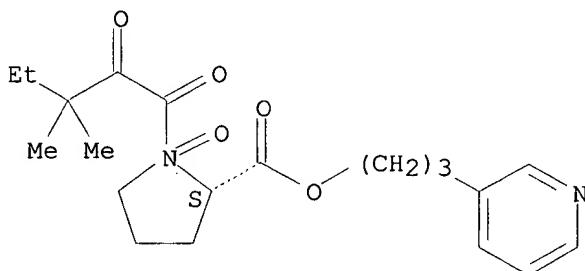
Absolute stereochemistry.



RN 251956-60-2 HCPLUS

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Absolute stereochemistry.



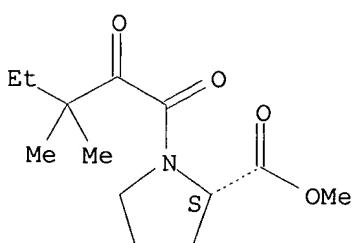
IT 186268-77-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of pyridinyl N-acylprolinates and analogs as hair  
growth promoters)

RN 186268-77-9 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, methyl ester (9CI) (CA  
INDEX NAME)

Absolute stereochemistry.



L12 ANSWER 3 OF 14 HCPLUS COPYRIGHT 2001 ACS

AN 2000:384175 HCPLUS

DN 133:30959

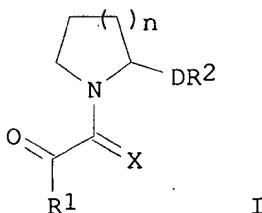
TI Preparation of prolinylalkanediones and related compounds for treating  
neurological disease, vision disorders, and alopecia.

IN Hamilton, Gregory S.; Norman, Mark H.; Wu, Yong-qian

KATHLEEN FULLER EIC1700 308-4290

PA GPI Nil Holdings, Inc., USA; Amgen, Inc.  
 SO PCT Int. Appl., 166 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM C07D403-04  
 ICS C07D409-12; A61P017-14; A61K031-40; C07D413-04; A61P025-28;  
     A61K031-41; C07D207-09; A61P027-00; A61K031-42; C07D403-06;  
     A61K031-50; C07D211-34; C07D207-16; C07D405-12  
 CC 34-2 (Amino Acids, Peptides, and Proteins)  
 Section cross-reference(s): 1  
 FAN.CNT 1  

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000032588	A2	20000608	WO 1999-US28663	19991203
WO 2000032588	A3	20010222		
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PRAI US 1998-204237	A	19981203		
US 1999-453571	A	19991202		
OS MARPAT 133:30959				
GI				



AB Title compds. [I; n = 1-3; X = O, S; R1 = (substituted) alkyl, alkenyl, aryl, heteroaryl, carbocyclyl, heterocyclyl; D = bond, (substituted) alkyl, alkenyl, alkynyl; R2 = CO<sub>2</sub>H, (substituted) CO<sub>2</sub>H isostere], were prep'd. Thus, L-proline Me ester hydrochloride in CH<sub>2</sub>Cl<sub>2</sub> was treated with Et<sub>3</sub>N and then with MeO<sub>2</sub>CCOCl to give 88% Me (2S)-1-(1,2-dioxo-2-methoxyethyl)-2-pyrrolidinecarboxylate. The latter in THF at -78.degree. was treated with 1,1-dimethylpropylmagnesium chloride followed by 3 h stirring at -78.degree. to give 75% Me (2S)-1-(1,2-dioxo-3,3-dimethylpentyl)-2-pyrrolidinecarboxylate. This was stirred overnight with aq. LiOH in MeOH to give 87% (2S)-1-(1,2-dioxo-3,3-dimethylpentyl)-2-pyrrolidinecarboxylic acid. In the MPTP model of Parkinson's disease in mice, I at 10 mg/kg orally gave 10.4-46.5% recovery of TH-stained dopaminergic neurons.  
 ST prolinylalkanedione prep'n neurol disease vision disorder **alopecia** treatment; memory disorder treatment prolinylalkanedione prep'n  
 IT Nervous system (Huntington's chorea, treatment; prep'n. of prolinylalkanediones and related compds. for treating neurol. disease, vision disorders, and **alopecia**)  
 IT Nervous system (amyotrophic lateral sclerosis, treatment; prep'n. of prolinylalkanediones and related compds. for treating neurol. disease, KATHLEEN FULLER EIC1700 308-4290

vision disorders, and **alopecia**)

IT Nervous system  
 (disease, treatment; prepn. of prolinylalkanediones and related compds.  
 for treating neurol. disease, vision disorders, and **alopecia**)

IT Memory, biological  
 Vision  
 (disorder, treatment; prepn. of prolinylalkanediones and related  
 compds. for treating neurol. disease, vision disorders, and  
**alopecia**)

IT Regeneration, animal  
 (nerve, stimulators; prepn. of prolinylalkanediones and related compds.  
 for treating neurol. disease, vision disorders, and **alopecia**)

IT Nerve  
 (peripheral, damage treatment; prepn. of prolinylalkanediones and  
 related compds. for treating neurol. disease, vision disorders, and  
**alopecia**)

IT Anti-Alzheimer's agents  
 Antiparkinsonian agents  
 (prepn. of prolinylalkanediones and related compds. for treating  
 neurol. disease, vision disorders, and **alopecia**)

IT Amino acids, preparation  
 RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic  
 preparation); THU (Therapeutic use); BIOL (Biological study); PREP  
 (Preparation); USES (Uses)  
 (prepn. of prolinylalkanediones and related compds. for treating  
 neurol. disease, vision disorders, and **alopecia**)

IT **Alopecia**  
 (treatment; prepn. of prolinylalkanediones and related compds. for  
 treating neurol. disease, vision disorders, and **alopecia**)

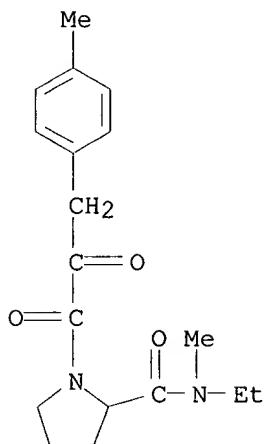
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273925-00-1P **273925-01-2P**

RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic  
 preparation); THU (Therapeutic use); BIOL (Biological study); PREP  
 (Preparation); USES (Uses)  
 (prepn. of prolinylalkanediones and related compds. for treating  
 neurol. disease, vision disorders, and **alopecia**)

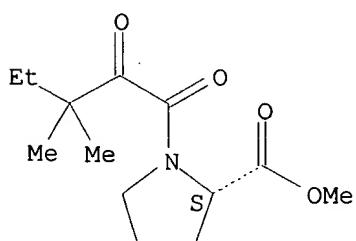
IT 79-19-6, Thiosemicarbazide 95-14-7, 1H-Benzotriazole 100-02-7,  
 KATHLEEN FULLER EIC1700 308-4290

4-Nitrophenol, reactions 1576-35-8, p-Toluenesulfonylhydrazide  
 2133-40-6, L-Proline methyl ester hydrochloride 2266-41-3 2361-27-5  
 4755-77-5, Ethyl chlorooxoacetate 5781-53-3; Methyl oxalyl chloride  
 7511-13-9 10393-86-9, Methanesulfonylhydrazide 22059-22-9 22179-78-8  
 27469-60-9 28276-08-6, 1,1-Dimethylpropylmagnesium chloride 29335-36-2  
 32231-06-4 273925-05-6 273925-06-7  
 RL: RCT (Reactant)  
 (prepn. of prolinylalkanediones and related compds. for treating  
 neurol. disease, vision disorders, and **alopecia**)  
 IT 186268-77-9P 207444-86-8P 273925-02-3P 273925-03-4P  
 273925-04-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of prolinylalkanediones and related compds. for treating  
 neurol. disease, vision disorders, and **alopecia**)  
 IT 273925-01-2P  
 RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic  
 preparation); THU (Therapeutic use); BIOL (Biological study); PREP  
 (Preparation); USES (Uses)  
 (prepn. of prolinylalkanediones and related compds. for treating  
 neurol. disease, vision disorders, and **alopecia**)  
 RN 273925-01-2 HCPLUS  
 CN 2-Pyrrolidinecarboxamide, N-ethyl-N-methyl-1-[3-(4-methylphenyl)-1,2-  
 dioxopropyl]- (9CI) (CA INDEX NAME)



IT 186268-77-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of prolinylalkanediones and related compds. for treating  
 neurol. disease, vision disorders, and **alopecia**)  
 RN 186268-77-9 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, methyl ester (9CI) (CA  
 INDEX NAME)

Absolute stereochemistry.



L12 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2001 ACS  
 AN 2000:227463 HCAPLUS  
 DN 132:269827  
 TI Method of treating hair loss using ketoamides  
 IN Tiesman, Jay Patrick; Fulmer, Andrew Wayne; McIver, John Mcmillan;  
 Degenhardt, Charles Raymond; Eickhoff, David Joseph  
 PA The Procter & Gamble Company, USA  
 SO PCT Int. Appl., 71 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM A61K007-00  
 CC 62-3 (Essential Oils and Cosmetics)  
 Section cross-reference(s): 27, 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000018358	A2	20000406	WO 1999-US22215	19990924
	WO 2000018358	A3	20000727		
	W: AU, BR, CA, CN, JP, MX				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRAI	AU 6060299	A1	20000417	AU 1999-60602	19990924
	US 1998-102458	P	19980930		
	WO 1999-US22215	W	19990924		
AB	The present disclosure describes methods for treating hair loss in mammals, including arresting and/or reversing hair loss and promoting hair growth. The methods comprise administering a pyrrolidinyl or piperidinyl ketoamide and a pharmaceutically-acceptable carrier. (S)-N-(3,4,5-trimethoxyphenylglyoxyl)pipecolic acid 1,7-diphenyl-4-heptylamide was prep'd. and incorporated into a topical compn.				
ST	hair loss keto amide				
IT	Hair preparations (growth stimulants; treating hair loss using ketoamides)				
IT	Drug delivery systems (oral; treating hair loss using ketoamides)				
IT	Amides, biological studies RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (oxo; treating hair loss using ketoamides)				
IT	Drug delivery systems (topical; treating hair loss using ketoamides)				
IT	Alopecia (treating hair loss using ketoamides)				
IT	145912-40-9P 186268-54-2P 186268-71-3P 188614-93-9P 263239-96-9P 263239-97-0P				
	RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (treating hair loss using ketoamides)				
IT	637-59-2, 1-Bromo-3-phenylpropane 2046-18-6, 4-Phenylbutyronitrile 26250-84-0 88755-16-2, 3,4,5-Trimethoxyphenylglyoxylic acid 262608-73-1				
	RL: RCT (Reactant) (treating hair loss using ketoamides)				
IT	262608-86-6P 263238-16-0P 263238-17-1P				
	RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation) (treating hair loss using ketoamides)				
IT	186268-54-2P 186268-71-3P				
	RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)				

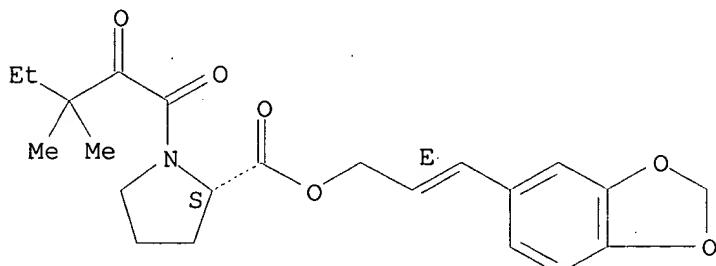
(treating hair loss using ketoamides)

RN 186268-54-2 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-(1,3-benzodioxol-5-yl)-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

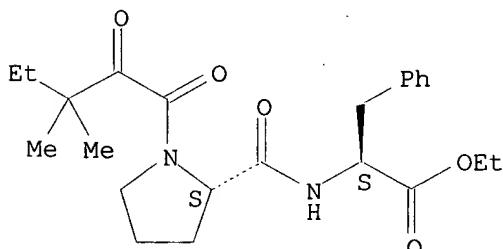
Double bond geometry as shown.



RN 186268-71-3 HCPLUS

CN L-Phenylalanine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L12 ANSWER 5 OF 14 HCPLUS COPYRIGHT 2001 ACS

AN 2000:209809 HCPLUS

DN 132:237375

TI Preparation of bridged heterocyclic derivatives for treatment of neurological and other disorders

IN Li, Jia He; Limburg, David; Hamilton, Gregory S.; Steiner, Joseph P.

PA Guilford Pharmaceuticals Inc., USA

SO PCT Int. Appl., 503 pp.

CODEN: PIXXD2

DT Patent

LA English

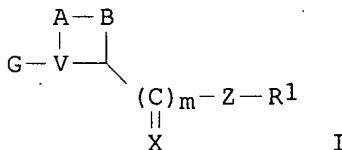
CC 34-3 (Amino Acids, Peptides, and Proteins)

Section cross-reference(s): 1, 27

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000016603	A2	20000330	WO 1998-US25577	19981203
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU	9919028	A1	20000410	AU 1999-19028	19981203
				KATHLEEN FULLER EIC1700 308-4290	

PRAI US 1998-101077 P 19980918  
US 1998-159105 A 19980923  
WO 1998-US25577 W 19981203  
OS MARPAT 132:237375  
GI



- |    |  |
|----|--|
| AB | Heterocyclic compds. I [A and B taken together form a satd., unsatd., or arom. heterocyclic or carbocyclic bridged ring moiety which contains one or more O, CR12, S, SO, SO2, N, NH or imino; V = CH, S, or N; X = O, CH2, or S; m = 0 or 1; G is an acyl, sulfonyl, or alkyl moiety; R1 = H, (un)substituted alkyl, cycloalkyl, a carboxylic acid, a bridged ring moiety, etc.; Z = CH2, alkyl, O, S, a direct bond, NH or imino, etc.] or their pharmaceutically acceptable salts, esters, or solvates were prep'd. for the treatment of neurol. and vision disorders, <b>alopecia</b> , etc. Thus, (2S)-(1-oxo-5-phenylpentyl)-1-(3,3-dimethyl-1,2-dioxopentyl)pyrrolidine was prep'd. from 1-chloro-4-phenylbutane, N-benzyl-L-proline Et ester, Me oxalyl chloride, and 1,1-dimethylpropylmagnesium chloride and shown to inhibit peptidyl prolyl isomerase with Ki = 31 nM. |
| ST | pyrrolidine acyl prep'n neurol vision disorder; neurol disorder bridged heterocycle; vision disorder bridged heterocycle; pipecolate diphenylpentylthio prep'n neurol vision disorder  |
| IT | Proteins, specific or class<br>RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (FKBP-12 (FK 506-binding protein, 12,000-mol.-wt.); prep'n. of bridged heterocyclic derivs. for treatment of neurol. and other disorders)   |
| IT | Nervous system<br>(amyotrophic lateral sclerosis; prep'n. of bridged heterocyclic derivs. for treatment of neurol. and other disorders)  |
| IT | Nervous system<br>(disease; prep'n. of bridged heterocyclic derivs. for treatment of neurol. and other disorders)  |
| IT | <b>Hair preparations</b><br>(growth stimulants; prep'n. of bridged heterocyclic derivs. for treatment of neurol. and other disorders)  |
| IT | <b>Alopecia</b><br>Alzheimer's disease<br>Eye, disease<br>Immunosuppressants<br>Parkinson's disease<br>(prep'n. of bridged heterocyclic derivs. for treatment of neurol. and other disorders)  |
| IT | Amino acids, preparation<br>RL: BAC (Biological activity or effector, except adverse); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)<br>(prep'n. of bridged heterocyclic derivs. for treatment of neurol. and other disorders)  |
| IT | Heterocyclic compounds<br>RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)<br>(prep'n. of bridged heterocyclic derivs. for treatment of neurol. and other disorders)  |

IT Immunophilins  
 RL: MSC (Miscellaneous)  
 (prepn. of bridged heterocyclic derivs. for treatment of neurol. and other disorders)

IT Eye, disease  
 (retina, ischemia; prepn. of bridged heterocyclic derivs. for treatment of neurol. and other disorders)

IT 222171-83-7P 222171-84-8P 222171-85-9P  
 RL: BAC (Biological activity or effector, except adverse); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (prepn. of bridged heterocyclic derivs. for treatment of neurol. and other disorders)

IT 73096-19-2P 141084-63-1P 152754-34-2P 152754-35-3P 152754-36-4P  
 152754-38-6P 152754-42-2P 155668-51-2P 155668-53-4P 155668-86-3P  
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 RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (prepn. of bridged heterocyclic derivs. for treatment of neurol. and other disorders)

IT 152754-55-7 210048-30-9 210103-88-1 210103-92-7 212607-81-3  
 222171-48-4 222171-57-5 222171-58-6 251950-42-2 251969-48-9  
 252770-38-0 252770-39-1 258871-54-4  
 RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (prepn. of bridged heterocyclic derivs. for treatment of neurol. and other disorders)

IT 95076-93-0, Peptidyl prolyl isomerase  
 RL: BPR (Biological process); BIOL (Biological study); PROC (Process)  
 (prepn. of bridged heterocyclic derivs. for treatment of neurol. and other disorders)

IT 62-56-6, Thiourea, reactions 86-81-7, 3,4,5-Trimethoxybenzaldehyde  
 96-15-1, 2-Methylbutylamine 103-63-9, Phenethyl bromide 108-98-5,  
 Phenyl mercaptan, reactions 122-97-4, 3-Phenyl-1-propanol 955-40-8,  
 n-Benzyl-L-proline ethyl ester 1122-82-3, Cyclohexyl isothiocyanate  
 2133-40-6, L-Proline methyl ester hydrochloride 2605-67-6, Methyl  
 (triphenylphosphoranylidene)acetate 2859-67-8, 3-(3-Pyridyl)-1-propanol  
 3173-53-3, Cyclohexyl isocyanate 4830-93-7, 1-Chloro-4-phenylbutane  
 5406-18-8, 3-(p-Methoxyphenyl)-1-propanol 5781-53-3, Methyl oxalyl  
 chloride 7531-52-4, L-Prolinamide 15761-39-4 23356-96-9, s +  
 2-Pyrrolidinemethanol 26250-84-0 28276-08-6, 1,1-  
 Dimethylpropylmagnesium chloride 32559-18-5, Methyl pipecolate  
 hydrochloride 34592-47-7, L-Thioproline 222171-36-0

RL: RCT (Reactant)

(prepn. of bridged heterocyclic derivs. for treatment of neurol. and  
 other disorders)

IT 104-53-0P, Benzeneopropanal 17486-86-1P 20329-96-8P 57293-19-3P  
 69603-49-2P, 3-Pyridinepropanethiol 88537-44-4P 89113-44-0P  
 139419-63-9P **186268-77-9P** 186268-78-0P 205388-66-5P  
 205388-67-6P 205388-68-7P 210048-37-6P 210048-38-7P 210103-98-3P  
 210103-99-4P 217186-09-9P 217186-59-9P 217186-60-2P 217186-61-3P  
 222171-37-1P 222171-38-2P 251917-76-7P 251953-31-8P 251953-33-0P  
 251954-80-0P 261928-56-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)

(prepn. of bridged heterocyclic derivs. for treatment of neurol. and  
 other disorders)

IT 30273-62-2P 53560-26-2P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of bridged heterocyclic derivs. for treatment of neurol. and  
 other disorders)

IT **186268-50-8P 186268-51-9P 186268-52-0P**  
**186268-53-1P 186268-54-2P 186268-56-4P**  
**186268-57-5P 186268-58-6P 186268-63-3P**  
**186268-64-4P 186268-65-5P 186268-66-6P**  
**186268-67-7P 186268-68-8P 186452-05-1P**  
**186452-06-2P 186452-07-3P 186452-08-4P**  
**186452-09-5P 186452-10-8P 186452-11-9P**  
**186452-12-0P 186452-13-1P 186452-14-2P**  
**186452-15-3P 186452-16-4P 186452-17-5P**  
**186452-18-6P 186452-19-7P 186452-20-0P**  
**212762-79-3P**

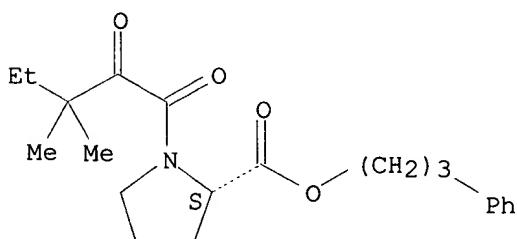
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic  
 preparation); THU (Therapeutic use); BIOL (Biological study); PREP  
 (Preparation); USES (Uses)

(prepn. of bridged heterocyclic derivs. for treatment of neurol. and  
 other disorders)

RN 186268-50-8 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-phenylpropyl ester (9CI)  
 (CA INDEX NAME)

Absolute stereochemistry.

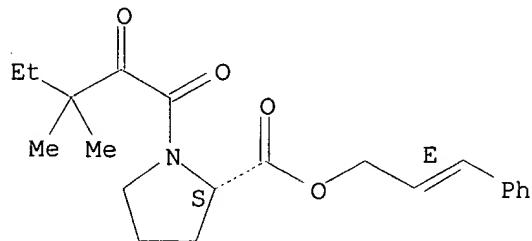


RN 186268-51-9 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-phenyl-2-propenyl  
 KATHLEEN FULLER EIC1700 308-4290

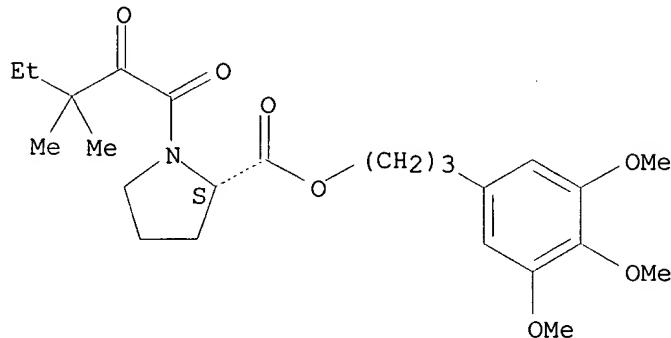
ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.



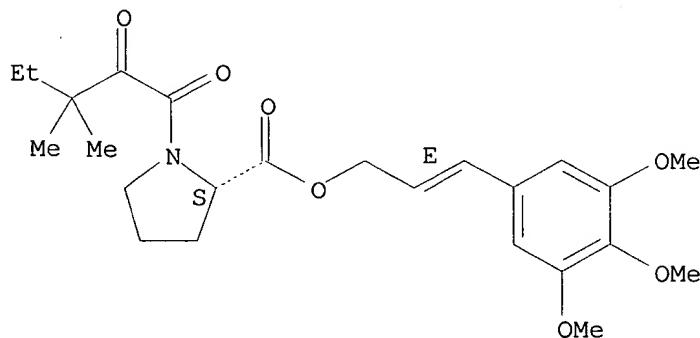
RN 186268-52-0 HCAPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3,4,5-trimethoxyphenyl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



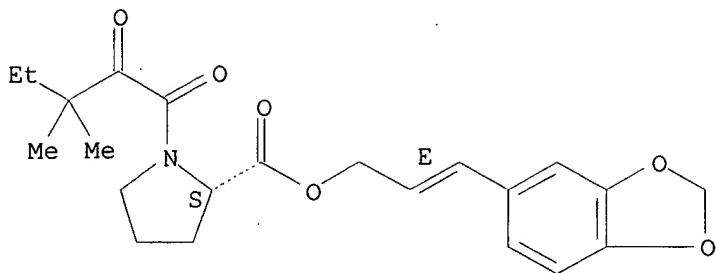
RN 186268-53-1 HCAPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-(3,4,5-trimethoxyphenyl)-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.



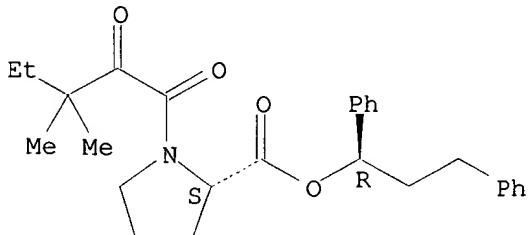
RN 186268-54-2 HCAPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-(1,3-benzodioxol-5-yl)-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.



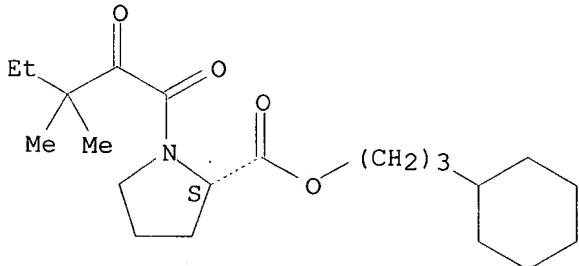
RN 186268-56-4 HCAPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1R)-1,3-diphenylpropyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



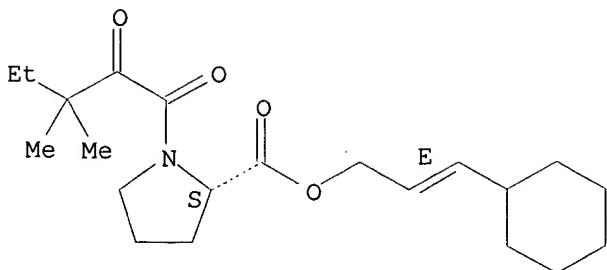
RN 186268-57-5 HCAPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-cyclohexylpropyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



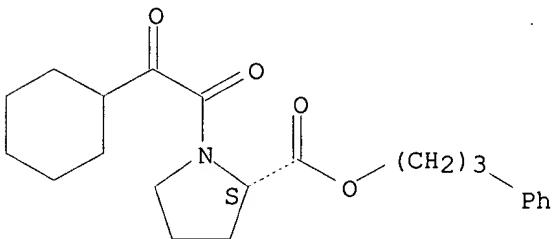
RN 186268-58-6 HCAPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-cyclohexyl-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry as shown.



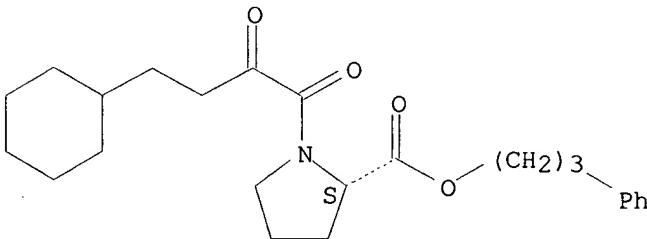
RN 186268-63-3 HCAPLUS  
 CN L-Proline, 1-(cyclohexyloxooacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



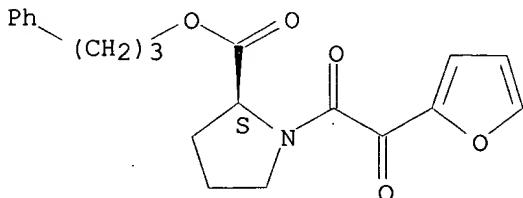
RN 186268-64-4 HCAPLUS  
 CN L-Proline, 1-(4-cyclohexyl-1,2-dioxobutyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 186268-65-5 HCAPLUS  
 CN L-Proline, 1-(2-furanyloxooacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

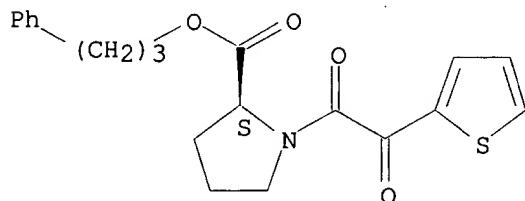
Absolute stereochemistry.



RN 186268-66-6 HCAPLUS  
 CN L-Proline, 1-(oxo-2-thienylacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX KATHLEEN FULLER EIC1700 308-4290)

NAME)

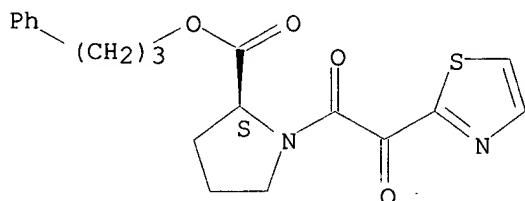
Absolute stereochemistry.



RN 186268-67-7 HCPLUS

CN L-Proline, 1-(oxo-2-thiazolylacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

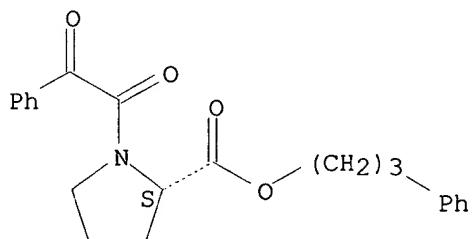
Absolute stereochemistry.



RN 186268-68-8 HCPLUS

CN L-Proline, 1-(oxophenylacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

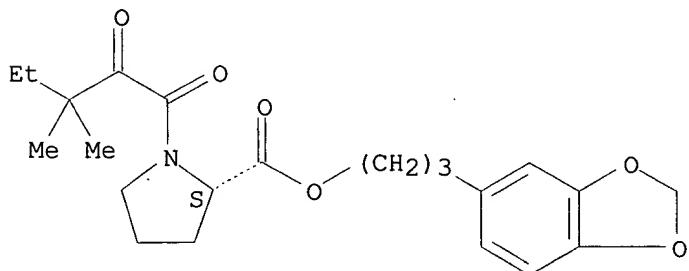
Absolute stereochemistry.



RN 186452-05-1 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(1,3-benzodioxol-5-yl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

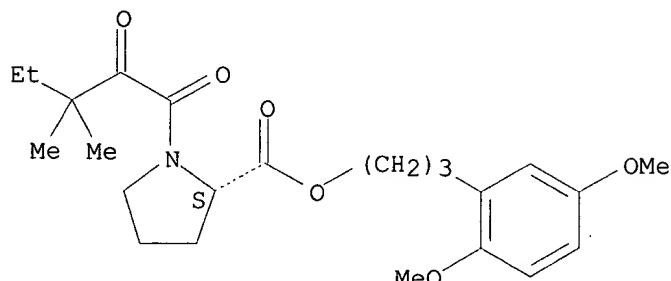


RN 186452-06-2 HCPLUS

KATHLEEN FULLER EIC1700 308-4290

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(2,5-dimethoxyphenyl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

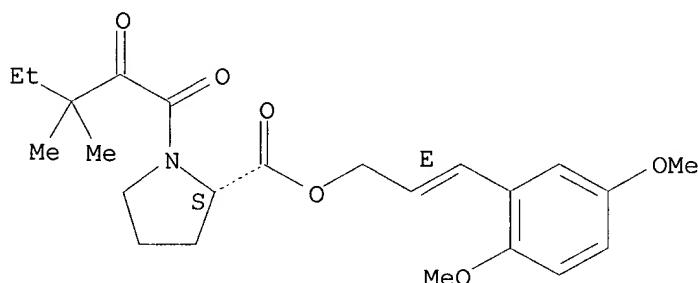


RN 186452-07-3 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-(2,5-dimethoxyphenyl)-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

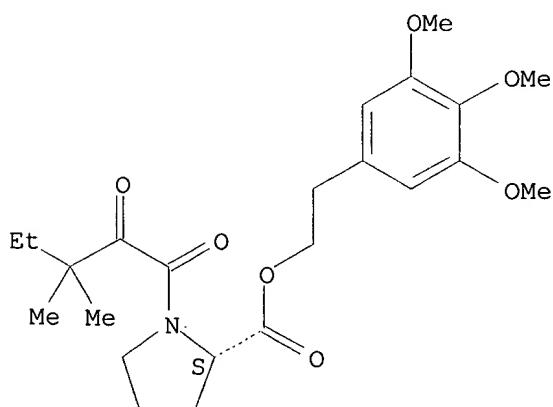
Double bond geometry as shown.



RN 186452-08-4 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 2-(3,4,5-trimethoxyphenyl)ethyl ester (9CI) (CA INDEX NAME)

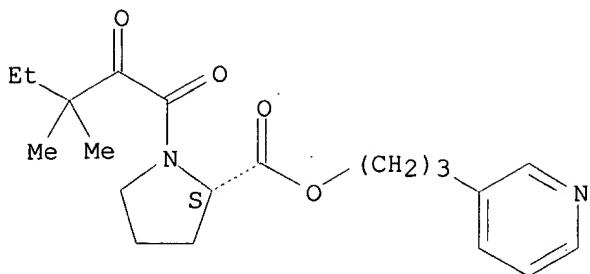
Absolute stereochemistry.



RN 186452-09-5 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3-pyridinyl)propyl ester (9CI) (CA INDEX NAME)

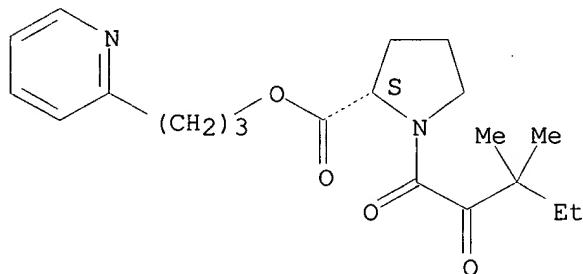
Absolute stereochemistry.



RN 186452-10-8 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(2-pyridinyl)propyl ester  
(9CI) (CA INDEX NAME)

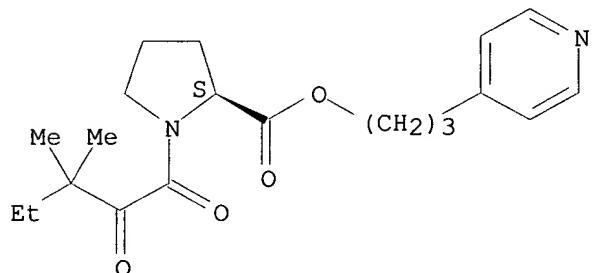
Absolute stereochemistry.



RN 186452-11-9 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(4-pyridinyl)propyl ester  
(9CI) (CA INDEX NAME)

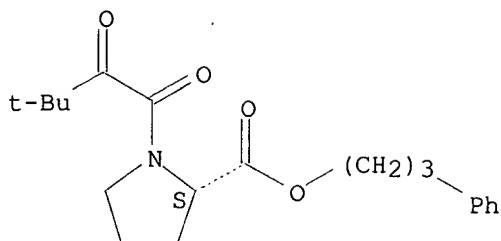
Absolute stereochemistry.



RN 186452-12-0 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxobutyl)-, 3-phenylpropyl ester (9CI)  
(CA INDEX NAME)

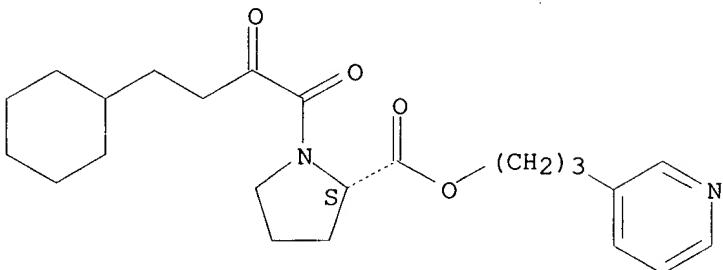
Absolute stereochemistry.



RN 186452-13-1 HCAPLUS

CN L-Proline, 1-(4-cyclohexyl-1,2-dioxobutyl)-, 3-(3-pyridinyl)propyl ester  
(9CI) (CA INDEX NAME)

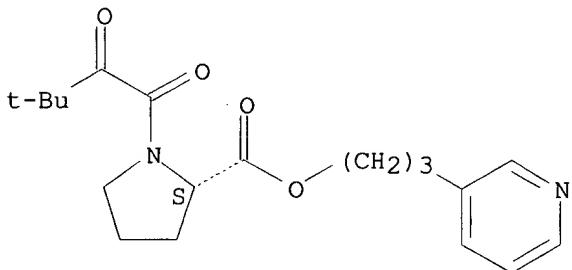
Absolute stereochemistry.



RN 186452-14-2 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxobutyl)-, 3-(3-pyridinyl)propyl ester  
(9CI) (CA INDEX NAME)

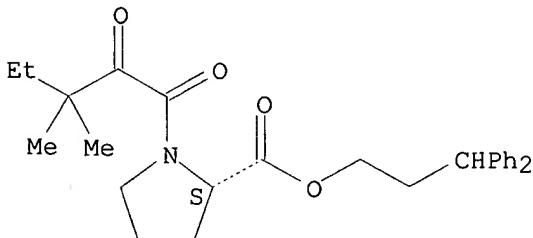
Absolute stereochemistry.



RN 186452-15-3 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3,3-diphenylpropyl ester  
(9CI) (CA INDEX NAME)

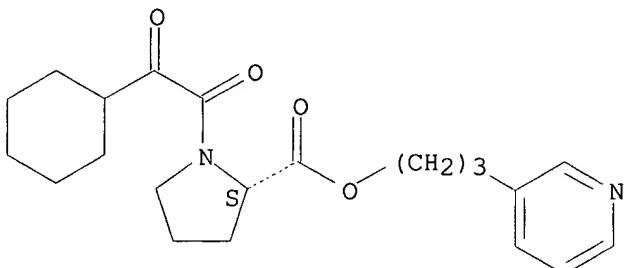
Absolute stereochemistry.



RN 186452-16-4 HCPLUS

CN L-Proline, 1-(cyclohexyloxooacetyl)-, 3-(3-pyridinyl)propyl ester (9CI)  
(CA INDEX NAME)

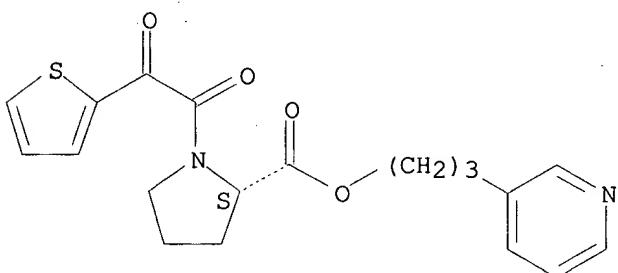
Absolute stereochemistry.



RN 186452-17-5 HCPLUS

CN L-Proline, 1-(oxo-2-thienylacetyl)-, 3-(3-pyridinyl)propyl ester (9CI)  
(CA INDEX NAME)

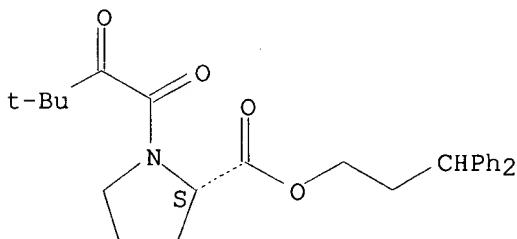
Absolute stereochemistry.



RN 186452-18-6 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxobutyl)-, 3,3-diphenylpropyl ester  
(9CI) (CA INDEX NAME)

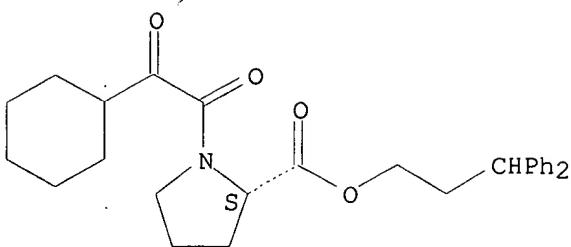
Absolute stereochemistry.



RN 186452-19-7 HCPLUS

CN L-Proline, 1-(cyclohexyloxooacetyl)-, 3,3-diphenylpropyl ester (9CI) (CA  
INDEX NAME)

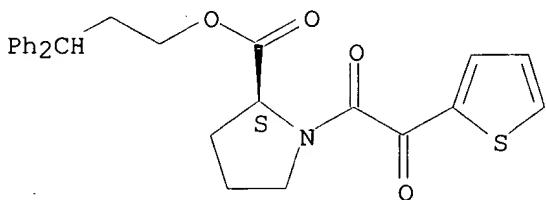
Absolute stereochemistry.



RN 186452-20-0 HCPLUS

CN L-Proline, 1-(oxo-2-thienylacetyl)-, 3,3-diphenylpropyl ester (9CI) (CA INDEX NAME)

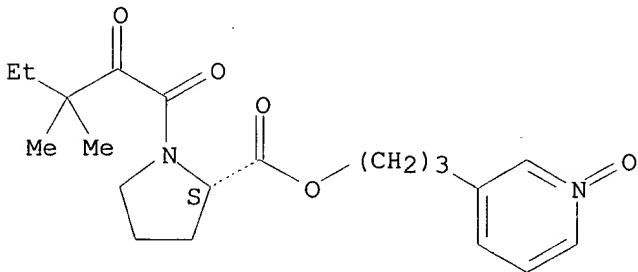
Absolute stereochemistry.



RN 212762-79-3 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(1-oxido-3-pyridinyl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



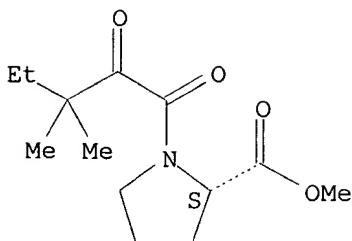
IT 186268-77-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of bridged heterocyclic derivs. for treatment of neurol. and  
other disorders)

RN 186268-77-9 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L12 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2001 ACS

AN 1999:808660 HCAPLUS

DN 132:44998

TI N-linked sulfonamides of heterocyclic thioesters, their preparation, and their use in treating **alopecia** and promoting hair growth

IN Steiner, Joseph P.; Hamilton, Gregory S.

PA GPI Nil Holdings, Inc., USA

SO U.S., 28 pp., Cont.-in-part of U.S. Ser. No. 869,426.

CODEN: USXXAM

DT Patent

LA English

IC ICM A61K031-40

ICS A61K031-445

NCL 514424000

CC 1-12 (Pharmacology)

Section cross-reference(s): 27, 63

FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6004993	A	19991221	US 1998-89375	19980603
	US 5945441	A	19990831	US 1997-869426	19970604
	ZA 9804621	A	19981204	ZA 1998-4621	19980529
	ZA 9804778	A	19981204	ZA 1998-4778	19980603
	ZA 9804783	A	19981204	ZA 1998-4783	19980603
	US 6239164	B1	20010529	US 1999-369860	19990809

PRAI US 1997-869426 A2 19970604

OS MARPAT 132:44998

AB Pharmaceutical compns. and methods for treating **alopecia** and promoting hair growth are provided which use N-linked sulfonamides of heterocyclic thioesters (prepn. described).

ST sulfonamide heterocyclic thioester prepn **alopecia** pharmaceutical; hair growth sulfonamide heterocyclic thioester prepn

IT Proteins, specific or class

RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (FKBP (FK 506-binding protein), FKBP-type immunophilin; N-linked sulfonamides of heterocyclic thioesters, prepn., and use in treating **alopecia** and promoting hair growth)

IT Proteins, specific or class

RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (FKBP-12 (FK 506-binding protein, 12,000-mol.-wt.); N-linked sulfonamides of heterocyclic thioesters, prepn., and use in treating **alopecia** and promoting hair growth)

IT Immunophilins

RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (FKBP-type; N-linked sulfonamides of heterocyclic thioesters, prepn., and use in treating **alopecia** and promoting hair growth)

IT **Alopecia**

Shampoos

(N-linked sulfonamides of heterocyclic thioesters, prepn., and use in treating **alopecia** and promoting **hair growth**)

IT Sulfonamides  
 RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (N-linked sulfonamides of heterocyclic thioesters, prepn., and use in treating **alopecia** and promoting **hair growth**)

IT Drug delivery systems  
 (emulsions; N-linked sulfonamides of heterocyclic thioesters, prepn., and use in treating **alopecia** and promoting **hair growth**)

IT Hair preparations  
 (growth stimulants; N-linked sulfonamides of heterocyclic thioesters, prepn., and use in treating **alopecia** and promoting **hair growth**)

IT Drug delivery systems  
 (liqs.; N-linked sulfonamides of heterocyclic thioesters, prepn., and use in treating **alopecia** and promoting **hair growth**)

IT Drug delivery systems  
 (lotions; N-linked sulfonamides of heterocyclic thioesters, prepn., and use in treating **alopecia** and promoting **hair growth**)

IT Drug delivery systems  
 (ointments, creams; N-linked sulfonamides of heterocyclic thioesters, prepn., and use in treating **alopecia** and promoting **hair growth**)

IT Esters, biological studies  
 RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (thio; N-linked sulfonamides of heterocyclic thioesters, prepn., and use in treating **alopecia** and promoting **hair growth**)

IT 210048-11-6P 210048-13-8P 210048-25-2P 222171-28-0P  
 RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (N-linked sulfonamides of heterocyclic thioesters, prepn., and use in treating **alopecia** and promoting **hair growth**)

IT 186452-09-5, GPI 1046 205388-16-5, GPI 1389 205388-30-3, GPI 1234 210048-11-6D, esters 210048-17-2 210048-19-4 210048-20-7  
 210048-21-8 210048-22-9 210048-25-2D, esters 210048-30-9, GPI 1312  
 210048-30-9D, esters 210103-88-1, GPI 1605 222171-24-6 222171-25-7  
 222171-27-9 222171-28-0D, esters 222171-29-1 222171-30-4  
 222171-31-5 222171-32-6 252720-21-1 252770-38-0, GPI 1572  
 252770-39-1, GPI 1511  
 RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (N-linked sulfonamides of heterocyclic thioesters, prepn., and use in treating **alopecia** and promoting **hair growth**)

IT 104-53-0P, 3-Phenyl-1-propanal 17486-86-1P, 1,5-Diphenyl-3-pentanol  
 57293-19-3P 88537-44-4P 210048-37-6P 210048-38-7P 217186-63-5P  
 251917-77-8P 252720-22-2P 252720-23-3P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and reaction; N-linked sulfonamides of heterocyclic thioesters, prepn., and use in treating **alopecia** and promoting **hair growth**)

IT 62-56-6, Thiourea, reactions 98-09-9, Benzenesulfonyl chloride  
 98-59-9, p-Toluenesulfonyl chloride 103-63-9, 2-(Bromoethyl)benzene  
 122-97-4, 3-Phenyl-1-propanol 1939-99-7, .alpha.-Toluenesulfonyl  
 chloride 5406-18-8, 3-(p-Methoxyphenyl)-1-propanol 15761-39-4  
 26250-84-0  
 RL: RCT (Reactant)  
 (reaction; N-linked sulfonamides of heterocyclic thioesters, prepn., and use in treating **alopecia** and promoting **hair growth**)

- RE
- (1) Anon; DE 2505114 1976 HCAPLUS
  - (2) Anon; EP 12401 1980 HCAPLUS
  - (3) Anon; EP 48159 1982 HCAPLUS
  - (4) Anon; EP 50800 1982 HCAPLUS
  - (5) Anon; EP 73143 1983 HCAPLUS
  - (6) Anon; EP 88350 1983 HCAPLUS
  - (7) Anon; ZA 9207782 1983 HCAPLUS
  - (8) Anon; EP 196841 1986 HCAPLUS
  - (9) Anon; DE 3508251 1986 HCAPLUS
  - (10) Anon; EP 260118 1988 HCAPLUS
  - (11) Anon; WO 8800040 1988 HCAPLUS
  - (12) Anon; WO 8809789 1988 HCAPLUS
  - (13) Anon; EP 333174 1989 HCAPLUS
  - (14) Anon; WO 8906234 1989 HCAPLUS
  - (15) Anon; EP 0420707 1990 HCAPLUS
  - (16) Anon; EP 0471135 1990 HCAPLUS
  - (17) Anon; EP 352000 1990 HCAPLUS
  - (18) Anon; EP 378318 1990 HCAPLUS
  - (19) Anon; DE 3931051 1990 HCAPLUS
  - (20) Anon; WO 9012805 1990 HCAPLUS
  - (21) Anon; EP 0443983 1991 HCAPLUS
  - (22) Anon; EP 0494005 1991 HCAPLUS
  - (23) Anon; DE 4015255 1991 HCAPLUS
  - (24) Anon; EP 405994 1991 HCAPLUS
  - (25) Anon; EP 419049 1991 HCAPLUS
  - (26) Anon; EP 423714 1991 HCAPLUS
  - (27) Anon; WO 9104985 1991 HCAPLUS
  - (28) Anon; WO 9113088 1991 HCAPLUS
  - (29) Anon; JP 04-149166 1992 HCAPLUS
  - (30) Anon; EP 0519819 1992 HCAPLUS
  - (31) Anon; GB 2247456 1992 HCAPLUS
  - (32) Anon; EP 468339 1992 HCAPLUS
  - (33) Anon; WO 9200278 1992 HCAPLUS
  - (34) Anon; WO 9203472 1992 HCAPLUS
  - (35) Anon; WO 9204370 1992 HCAPLUS
  - (36) Anon; JP 05-178824 1993 HCAPLUS
  - (37) Anon; EP 564924 1993 HCAPLUS
  - (38) Anon; EP 572365 1993 HCAPLUS
  - (39) Anon; EP 652229 1995 HCAPLUS
  - (40) Anon; EP 0823419 1997 HCAPLUS
  - (41) Armistead; US 5192773 1993 HCAPLUS
  - (42) Armistead; US 5330993 1994 HCAPLUS
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 (70) Nelson; US 5385908 1995 HCPLUS  
 (71) Norton; US 5506228 1996 HCPLUS  
 (72) Ok; US 5208241 1993 HCPLUS  
 (73) Organ; US 5284877 1994 HCPLUS  
 (74) Proctor; US 5472687 1995 HCPLUS  
 (75) Proctor; US 5714510 1998 HCPLUS  
 (76) Rinehart; US 5294603 1994 HCPLUS  
 (77) Rupprecht; US 5284840 1994 HCPLUS  
 (78) Schreiber; US 5447915 1995 HCPLUS  
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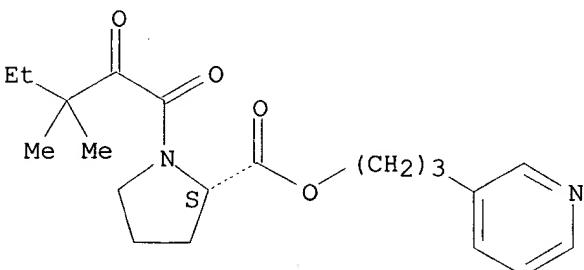
IT 186452-09-5, GPI 1046

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (N-linked sulfonamides of heterocyclic thioesters, prepn., and use in treating alopecia and promoting hair growth)

RN 186452-09-5 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3-pyridinyl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

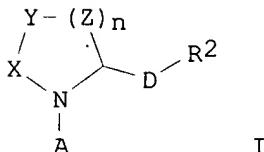


- L12 ANSWER 7 OF 14 HCPLUS COPYRIGHT 2001 ACS  
 AN 1999:784085 HCPLUS  
 DN 132:18814  
 TI Aza-heterocyclic compounds used to treat neurological disorders and hair loss  
 IN Hamilton, Gregory S.; Norman, Mark H.; Wu, Yong-Qian; Li, Jia-He; Steiner, Joseph P.  
 PA Guilford Pharmaceuticals Inc., USA; Amgen, Inc.  
 SO PCT Int. Appl., 106 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM C07D263-06  
 ICS A61K031-42; C07D277-06; A61K031-425; C07D207-16; A61K031-40;  
 C07D211-60; A61K031-445

CC 1-12 (Pharmacology)  
 Section cross-reference(s): 28, 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9962888	A1	19991209	WO 1998-US25574	19981203
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
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	BR 9815919	A	20010220	BR 1998-15919	19981203
	EP 1102756	A1	20010530	EP 1998-961867	19981203
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
PRAI	NO 2000006117	A	20010201	NO 2000-6117	20001201
	US 1998-87843	P	19980603		
	WO 1998-US25574	W	19981203		
OS	MARPAT 132:18814				
GI					



AB The invention is directed to carboxylic acids and isosteres of heterocyclic ring compds. I [X, Y, Z = C, O, S, N (provided that not all X, Y, Z are C); n = 1-3; A = R1C(O)C(O), R1C(O)C(S), R1SO2, (E)(R1)NC(O); R1, E = H, C1-9 (un)branched alkyl or alkenyl, aryl, etc.; D = C1-10 (un)branched alkyl, ethylene, butylene; R2 = carboxylic acid or carboxylic acid isostere] which have multiple heteroatoms within the heterocyclic ring, derivs. contg. N-linked diketos, sulfonamides, ureas and carbamates attached thereto, their prepn. and use for treating neurol. disorders including phys. damaged nerves and neurodegenerative diseases, as well as for treating **alopecia** and promoting **hair growth**.

ST azaheterocyclic deriv prepn neurol disorder **alopecia**; heterocyclic deriv neurol disorder **alopecia**; **hair growth** aza heterocyclic deriv; nerve damage aza heterocyclic deriv; neurodegenerative disease aza heterocyclic deriv

IT Nervous system  
 (amyotrophic lateral sclerosis; heterocyclic compds. for treatment of neurol. disorder or **hair loss**)

IT Neurotrophic factors  
 RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (brain-derived; heterocyclic compds. for treatment of neurol. disorder or **hair loss**)

IT Nervous system  
 (degeneration; heterocyclic compds. for treatment of neurol. disorder or **hair loss**)

IT Nervous system  
 (disease; heterocyclic compds. for treatment of neurol. disorder or  
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hair loss)  
IT Drug delivery systems  
(emulsions; heterocyclic compds. for treatment of neurol. disorder or hair loss)  
IT Neurotrophic factors  
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(glial-derived; heterocyclic compds. for treatment of neurol. disorder or hair loss)  
IT Hair preparations  
(growth stimulants; heterocyclic compds. for treatment of neurol. disorder or hair loss)  
IT Alopecia  
Anti-Alzheimer's agents  
Antiparkinsonian agents  
Drug delivery systems  
Nervous system agents  
Shampoos  
(heterocyclic compds. for treatment of neurol. disorder or hair loss)  
IT Ciliary neurotrophic factor  
Neurotrophic factors  
Platelet-derived growth factors  
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(heterocyclic compds. for treatment of neurol. disorder or hair loss)  
IT Brain, disease  
Spinal cord  
(injury; heterocyclic compds. for treatment of neurol. disorder or hair loss)  
IT Drug delivery systems  
(liqs.; heterocyclic compds. for treatment of neurol. disorder or hair loss)  
IT Drug delivery systems  
(lotions; heterocyclic compds. for treatment of neurol. disorder or hair loss)  
IT Regeneration, animal  
(nerve; heterocyclic compds. for treatment of neurol. disorder or hair loss)  
IT Drug delivery systems  
(ointments, creams; heterocyclic compds. for treatment of neurol. disorder or hair loss)  
IT Nerve, disease  
(peripheral neuropathy; heterocyclic compds. for treatment of neurol. disorder or hair loss)  
IT Nerve, disease  
(peripheral, injury; heterocyclic compds. for treatment of neurol. disorder or hair loss)  
IT Nerve  
(regeneration; heterocyclic compds. for treatment of neurol. disorder or hair loss)  
IT Brain, disease  
(stroke, brain damage-assocd.; heterocyclic compds. for treatment of neurol. disorder or hair loss)  
IT 251952-75-7P  
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(heterocyclic compds. for treatment of neurol. disorder or hair loss)  
IT 61912-98-9, Insulin-like growth factor 61912-98-9D, Insulin-like growth factor, truncated derivs. 100391-96-6 106096-92-8, Acidic fibroblast growth factor 106096-93-9, Basic fibroblast growth factor 130939-66-1,

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Neurotropin 3	143375-33-1,	Neurotropin 4	148499-03-0,	Neurotropin 5
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RL: BAC (Biological activity or effector, except adverse); THU

(Therapeutic use); BIOL (Biological study); USES (Uses)

(heterocyclic compds. for treatment of neurol. disorder or hair loss)

IT	251953-69-2	251953-70-5	251953-71-6	251953-72-7	251953-73-8
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 251954-86-6    251955-57-4

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (heterocyclic compds. for treatment of neurol. disorder or hair loss)

IT    251954-80-0P    **251954-81-1P**    251954-82-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and reaction; heterocyclic compds. for treatment of neurol.  
 disorder or hair loss)

IT    5781-53-3, Methyl oxalyl chloride    28276-08-6    222171-36-0  
 RL: RCT (Reactant)  
 (reaction; heterocyclic compds. for treatment of neurol. disorder or  
 hair loss)

RE.CNT 6

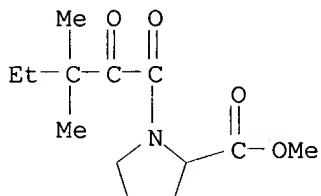
RE

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- (3) Mitsubishi Chem Ind; EP 0006633 A 1980 HCAPLUS
- (4) Mitsubishi Chem Ind Ltd; JP 56061390 A 1981
- (5) Ono Pharmaceutical Co; EP 0769498 A 1997 HCAPLUS
- (6) Vertex Pharma; WO 9200278 A 1992 HCAPLUS

IT    **251954-81-1P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and reaction; heterocyclic compds. for treatment of neurol.  
 disorder or hair loss)

RN    251954-81-1 HCAPLUS

CN    Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, methyl ester (9CI) (CA INDEX  
 NAME)



L12    ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2001 ACS

AN    1999:784078 HCAPLUS

DN    132:22860

TI    Preparation of aza-heterocyclic compounds used to treat neurological  
 disorders and hair loss

IN    Hamilton, Gregory S.; Norman, Mark H.; Wu, Yong-Qian; Steiner, Joseph P.  
 PA    Guilford Pharmaceuticals Inc., USA; Amgen, Inc.

SO    PCT Int. Appl., 96 pp.

CODEN: PIXXD2

DT    Patent

LA    English

IC    ICM C07D207-16

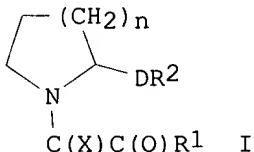
ICS    A61K031-40; C07D207-12; C07D403-04; A61K031-41

CC    27-1 (Heterocyclic Compounds (One Hetero Atom))

Section cross-reference(s): 1, 34

FAN.CNT 3

PATENT NO.		KIND	DATE	APPLICATION NO.		DATE
PI	WO 9962881	A1	19991209	WO 1998-US25573		19981203
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	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
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	BR 9815920	A	20010220	BR 1998-15920		19981203
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	NO 2000005903	A	20010202	NO 2000-5903		20001121
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	US 1998-101077	P	19980918			
WO 1998-US25573	W	19981203				
OS MARPAT 132:22860						
GI						



AB	Prepn. of N-heterocyclic carboxylic acids and carboxylic acid isosteres I [n = 1-3; X = O, S; R1 = C1-C9 straight or branched chain alkyl, C2-C9 straight or branched chain alkenyl, aryl, heteroaryl, carbocycle, heterocycle; D = bond, C1-C10 straight or branched chain alkyl, C2-C10 alkenyl, C2-C10 alkynyl; R2 = carboxylic acid, carboxylic acid isostere] and their use for treating neurol. disorders and for treating alopecia and promoting hair growth are described. E.g., (2S)-1-(1,2-dioxo-3,3-dimethylpentyl)-2-hydroxymethylpyrrolidine was prepd.
ST	aza heterocyclic prepn neurol disorder hair loss treatment; neurol disorder disorder aza heterocyclic; hair loss disorder aza heterocyclic; heterocyclic carboxylic acid prepn neurol disorder hair loss treatment
IT	Nervous system (disease; prepn. of aza-heterocyclic compds. used to treat neurol. disorders and hair loss)
IT	Alopecia (prepn. of aza-heterocyclic compds. used to treat neurol. disorders and hair loss)
IT	186268-78-0P 222171-48-4P 222171-57-5P. RL: BAC (Biological activity or effector, except adverse); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of aza-heterocyclic compds. used to treat neurol. disorders and hair loss)
IT	222171-52-0P 222171-58-6P 251917-42-7P 251949-15-2P 251949-16-3P 251949-17-4P 251949-18-5P 251949-19-6P 251949-20-9P 251949-21-0P 251949-22-1P 251949-23-2P 251949-24-3P 251949-25-4P 251949-26-5P 251949-27-6P 251949-28-7P 251949-29-8P 251949-30-1P 251949-31-2P 251949-32-3P 251949-33-4P 251949-34-5P 251949-35-6P 251949-36-7P

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251949-84-5P	251949-85-6P	251949-86-7P	251949-87-8P	251949-88-9P
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251949-94-7P	251949-95-8P	251949-96-9P	251949-97-0P	251949-98-1P
251949-99-2P	251950-00-2P	251950-01-3P	251950-02-4P	251950-03-5P
251950-04-6P	251950-05-7P	251950-06-8P	251950-07-9P	251950-08-0P
251950-09-1P	251950-10-4P	251950-11-5P	251950-12-6P	251950-13-7P
251950-14-8P	<b>251950-15-9P</b>	251950-16-0P	251950-17-1P	
251950-18-2P	251950-19-3P	251950-20-6P	251950-21-7P	251950-22-8P
251950-23-9P	251950-24-0P	251950-25-1P	251950-26-2P	251950-27-3P
251950-28-4P	251950-29-5P	251950-30-8P	251950-31-9P	251950-32-0P
251950-33-1P	251950-34-2P	251950-35-3P	251950-36-4P	251950-37-5P
251950-38-6P	251950-39-7P	251950-40-0P	251950-41-1P	251950-42-2P
251950-43-3P				

RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of aza-heterocyclic compds. used to treat neurol. disorders and hair loss)

IT 543-27-1, Isobutyl chloroformate 2133-40-6, L-Proline methyl ester hydrochloride

RL: RCT (Reactant)

(prepn. of aza-heterocyclic compds. used to treat neurol. disorders and hair loss)

IT **186268-77-9P** 207444-86-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)

(prepn. of aza-heterocyclic compds. used to treat neurol. disorders and hair loss)

RE.CNT 7

RE

- (1) Ariad Gene Therapeutics Inc; WO 9606097 A 1996 HCPLUS
- (2) Ariad Gene Therapeutics Inc; WO 9731898 A 1997 HCPLUS
- (3) Guilford Pharm Inc; WO 9640633 A 1996 HCPLUS
- (4) Guilford Pharm Inc; WO 9837885 A 1998 HCPLUS
- (5) Guilford Pharm Inc; WO 9855090 A 1998 HCPLUS
- (6) Guilford Pharm Inc; WO 9855091 A 1998 HCPLUS
- (7) Pharma, V; WO 9200278 A 1992 HCPLUS

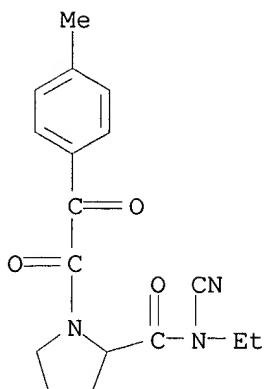
IT **251950-15-9P**

RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of aza-heterocyclic compds. used to treat neurol. disorders and hair loss)

RN 251950-15-9 HCPLUS

CN 2-Pyrrolidinecarboxamide, N-cyano-N-ethyl-1-[(4-methylphenyl)oxoacetyl]- (9CI) (CA INDEX NAME)



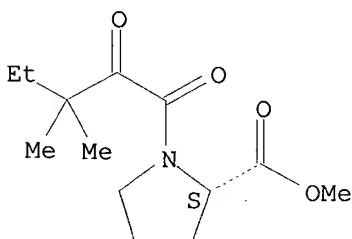
IT 186268-77-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of aza-heterocyclic compds. used to treat neurol. disorders and  
**hair loss**)

RN 186268-77-9 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L12 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2001 ACS

AN 1999:783908 HCAPLUS

DN 132:26637

TI Heterocyclic thioester and ketone **hair** growth compositions and uses

IN Hamilton, Gregory S.; Steiner, Joseph P.

PA Guilford Pharmaceuticals Inc., USA

SO PCT Int. Appl., 102 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K007-48

ICS A61K031-40; A61K031-44; A61K031-445; A61K031-425; A61K031-415;  
A61K031-535; A61K031-54

CC 62-3 (Essential Oils and Cosmetics)

Section cross-reference(s): 28

FAN.CNT 1

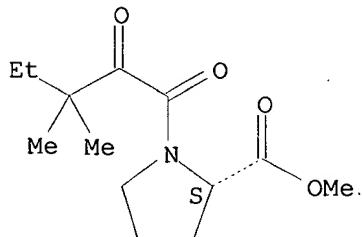
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9962488	A1	19991209	WO 1998-US11251	19980603
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			

KATHLEEN FULLER EIC1700 308-4290

RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG  
AU 9877171 A1 19991220 AU 1998-77171 19980603  
EP 1083873 A1 20010321 EP 1998-925157 19980603  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO  
PRAI WO 1998-US11251 A 19980603  
OS MARPAT 132:26637  
AB This invention relates to pharmaceutical compns. and methods for treating **alopecia** and promoting **hair** growth using heterocyclic thioesters and ketones. Thus, 2-phenyl-1-ethyl-(2S)-1-(3,3-dimethyl-1,2-dioxopentyl)-2-pyrrolidinonecarbothioate (I) was prep'd. by the reaction of Me pipecolate-HCl with Me oxalyl chloride followed by the reaction with 1,1-dimethylpropylmagnesium chloride, hydrolysis and reaction with Ph mercaptan. A **hair** lotion contained 95% EtOH 80.0, I 0.005, hinokitol 0.01, ethoxylated hardened castor oil 0.5, and water 19.0%, and perfume and dye qs.  
ST thioester heterocyclic **hair** growth prepn; ketones heterocyclic **hair** growth prepn  
IT **Hair** preparations  
(creams; heterocyclic thioesters and ketones for **hair** growth compns.)  
IT **Hair** preparations  
(emulsions; heterocyclic thioesters and ketones for **hair** growth compns.)  
IT **Hair** preparations  
(growth stimulants; heterocyclic thioesters and ketones for **hair** growth compns.)  
IT **Alopecia**  
Shampoos  
(heterocyclic thioesters and ketones for **hair** growth compns.)  
IT Immunophilins  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(heterocyclic thioesters and ketones for **hair** growth compns.)  
IT Ketones, biological studies  
RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(heterocyclic; heterocyclic thioesters and ketones for **hair** growth compns.)  
IT **Hair** preparations  
(lotions; heterocyclic thioesters and ketones for **hair** growth compns.)  
IT Carboxylic acids, biological studies  
RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(thiocarboxylic, esters, heterocyclic; heterocyclic thioesters and ketones for **hair** growth compns.)  
IT 205388-13-2P 205388-14-3P 205388-15-4P 205388-16-5P 205388-17-6P  
205388-18-7P 205388-19-8P 205388-20-1P 205388-22-3P 205388-23-4P  
205388-24-5P 205388-25-6P 205388-26-7P 205388-27-8P 205388-28-9P  
205388-29-0P 205388-30-3P 205388-31-4P 205388-32-5P 205388-33-6P  
205388-35-8P 205388-36-9P 205388-37-0P 205388-38-1P 205388-39-2P  
205388-42-7P 205388-43-8P 205388-44-9P 205388-45-0P 205388-48-3P  
205388-49-4P 205388-50-7P 205388-53-0P 205388-54-1P 205388-55-2P  
205388-56-3P 205388-57-4P 205388-58-5P 205388-59-6P 205388-60-9P  
205388-61-0P 205388-62-1P 205388-80-3P 217179-46-9P 217179-50-5P  
217180-44-4P 217180-90-0P 251948-44-4P 251948-45-5P 251948-46-6P  
251948-47-7P 251948-48-8P  
RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(heterocyclic thioesters and ketones for hair growth compns.)  
IT 108-98-5, Phenylmercaptan, reactions 955-40-8 2133-40-6 4830-93-7  
5781-53-3, Methylloxalyl chloride 28276-08-6 32559-18-5 139419-63-9  
**186268-77-9**  
RL: RCT (Reactant)  
(heterocyclic thioesters and ketones for hair growth compns.)  
IT 186268-78-0P 205388-64-3P 205388-65-4P 205388-66-5P 205388-67-6P  
205388-68-7P 222171-23-5P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(heterocyclic thioesters and ketones for hair growth compns.)  
RE.CNT 4  
RE  
(1) Fujisawa Pharm Co Ltd; EP 0423714 A 1991 HCPLUS  
(2) Guilford Pharm Inc; WO 9813343 A 1998 HCPLUS  
(3) Hallam, K; EP 0471135 A 1992 HCPLUS  
(4) Merck & Co Inc; WO 9314762 A 1993 HCPLUS  
IT **186268-77-9**  
RL: RCT (Reactant)  
(heterocyclic thioesters and ketones for hair growth compns.)  
RN 186268-77-9 HCPLUS  
CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L12 ANSWER 10 OF 14 HCPLUS COPYRIGHT 2001 ACS  
AN 1999:783906 HCPLUS  
DN 132:26635  
TI N-oxide of heterocyclic ester, amide, thioester, or ketone for hair growth compositions  
IN Hamilton, Gregory S.; Steiner, Joseph P.  
PA Guilford Pharmaceuticals Inc., USA  
SO PCT Int. Appl., 88 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
IC ICM A61K007-48  
ICS A61K031-44; A61K031-47  
CC 62-3 (Essential Oils and Cosmetics)  
Section cross-reference(s): 28

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9962486	A1	19991209	WO 1998-US11245	19980603
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			

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ZA 9804779	A	19990217	ZA 1998-4779	19980603
ZA 9804775	A	19990223	ZA 1998-4775	19980603
ZA 9804777	A	19990223	ZA 1998-4777	19980603
ZA 9804780	A	19990223	ZA 1998-4780	19980603
ZA 9804785	A	19990223	ZA 1998-4785	19980603
AU 9877168	A1	19991220	AU 1998-77168	19980603
EP 1082095	A1	20010314	EP 1998-925153	19980603
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
PRAI WO 1998-US11245	A	19980603		
OS MARPAT 132:26635				
AB	This invention relates to pharmaceutical compns. and methods for treating alopecia and promoting hair growth using N-oxides of heterocyclic esters, amides, thioesters, or ketones. Thus, 3-(3-pyridyl)-1-propyl-(2S)-1-(3,3-Dimethyl-1,2-dioxopentyl)-2-pyrrolidinecarboxylate N-oxide (I) was obtained by the oxidn. of 3-(3-pyridyl)-1-propyl-(2S)-1-(3,3-dimethyl-1,2-dioxopentyl)-2-pyrrolidinecarboxylate by m-chloroperbenzoic acid in methylene chloride. A hair lotion contained 95% eTOH 80.0, I 10.0, .alpha.-tocopherol acetate 0.01, ethoxylated hardened castor oil 0.5, and water 9.0%, and perfume and dye qs.			
ST	heterocyclic thioester oxide hair growth prepn; ketone heterocyclic oxide hair growth prepn; ester heterocyclic oxide hair growth prepn; amide heterocyclic oxide hair growth prepn			
IT	<b>Alopecia</b> Shampoos (N-oxide of heterocyclic ester or amide or thioester or ketones for hair growth compns.)			
IT	Immunophilins RL: BSU (Biological study, unclassified); BIOL (Biological study) (N-oxide of heterocyclic ester or amide or thioester or ketones for hair growth compns.)			
IT	Amine oxides RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (N-oxide of heterocyclic ester or amide or thioester or ketones for hair growth compns.)			
IT	<b>Hair preparations</b> (creams; N-oxide of heterocyclic ester or amide or thioester or ketones for hair growth compns.)			
IT	<b>Hair preparations</b> (emulsions; N-oxide of heterocyclic ester or amide or thioester or ketones for hair growth compns.)			
IT	<b>Hair preparations</b> (growth stimulants; N-oxide of heterocyclic ester or amide or thioester or ketones for hair growth compns.)			
IT	<b>Hair preparations</b> (lotions; N-oxide of heterocyclic ester or amide or thioester or ketones for hair growth compns.)			
IT	Amides, biological studies Ketones, biological studies RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (oxides; N-oxide of heterocyclic ester or amide or thioester or ketones for hair growth compns.)			
IT	<b>Carboxylic acids, biological studies</b> RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (thiocarboxylic, esters, oxides; N-oxide of heterocyclic ester or amide or thioester or ketones for hair growth compns.)			

IT 251956-60-2P 251956-61-3P 251956-62-4P  
 251956-63-5P 251956-64-6P 251956-65-7P  
 RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU  
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)  
 (N-oxide of heterocyclic ester or amide or thioester or ketones for  
 hair growth compns.)

IT 2133-40-6 2859-67-8, 3-Pyridinepropanol 5781-53-3, Methyl oxalyl  
 chloride 28276-08-6  
 RL: RCT (Reactant)  
 (N-oxide of heterocyclic ester or amide or thioester or ketones for  
 hair growth compns.)

IT 139419-63-9P 186268-77-9P 186268-78-0P 186452-09-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (N-oxide of heterocyclic ester or amide or thioester or ketones for  
 hair growth compns.)

RE.CNT 5

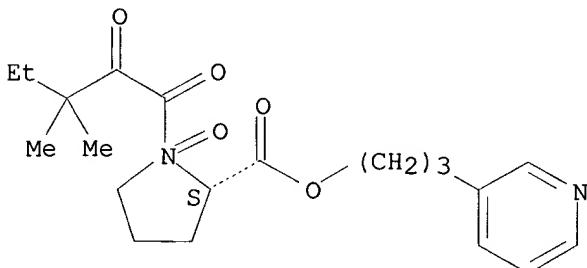
RE

(1) Bazzano, G; WO 8906234 A 1989 HCPLUS  
 (2) L'Oreal; EP 0420707 A 1991 HCPLUS  
 (3) L'Oreal; EP 0494005 A 1992 HCPLUS  
 (4) Proctor, P; US 5472687 A 1995 HCPLUS  
 (5) Proctor, P; US 5714510 A 1998 HCPLUS

IT 251956-60-2P 251956-61-3P 251956-62-4P  
 251956-63-5P 251956-64-6P 251956-65-7P  
 RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU  
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)  
 (N-oxide of heterocyclic ester or amide or thioester or ketones for  
 hair growth compns.)

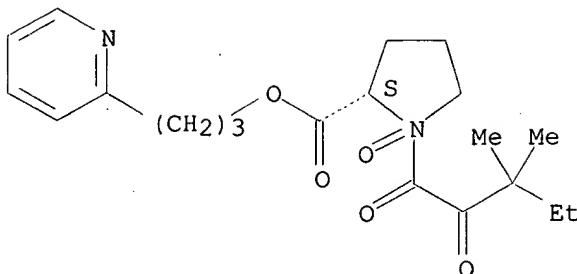
RN 251956-60-2 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3-pyridinyl)propyl ester,  
 1-oxide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 251956-61-3 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(2-pyridinyl)propyl ester,  
 1-oxide (9CI) (CA INDEX NAME)

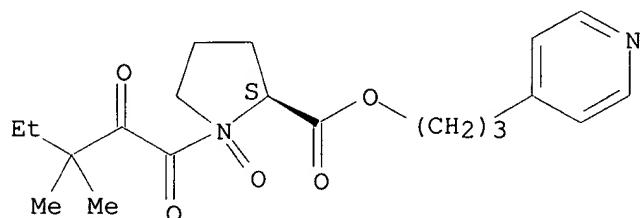
Absolute stereochemistry.



RN 251956-62-4 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(4-pyridinyl)propyl ester, 1-oxide (9CI) (CA INDEX NAME)

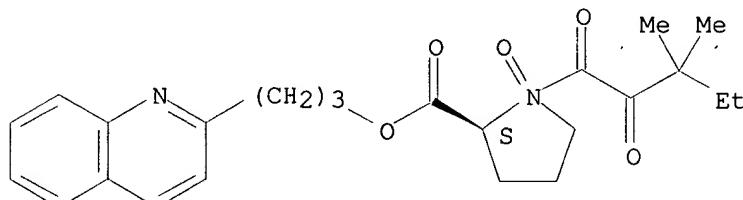
Absolute stereochemistry.



RN 251956-63-5 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(2-quinolinyl)propyl ester, 1-oxide (9CI) (CA INDEX NAME)

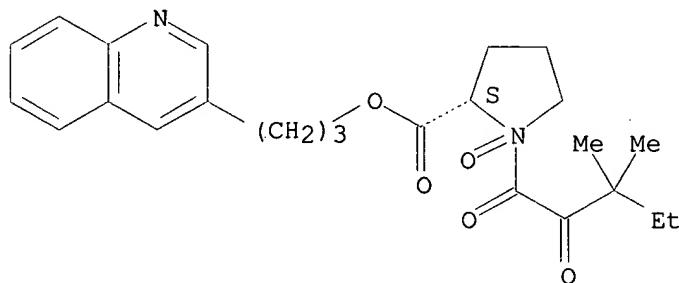
Absolute stereochemistry.



RN 251956-64-6 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3-quinolinyl)propyl ester, 1-oxide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

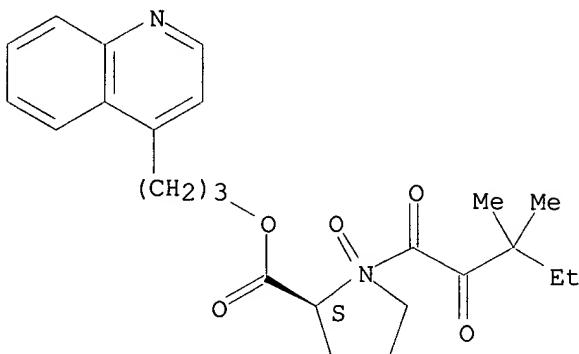


RN 251956-65-7 HCAPLUS

KATHLEEN FULLER EIC1700 308-4290

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(4-quinolinyl)propyl ester, 1-oxide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



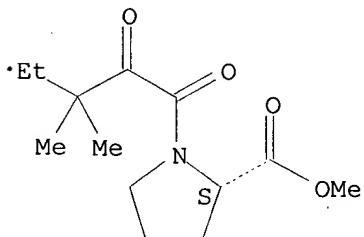
IT 186268-77-9P 186452-09-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(N-oxide of heterocyclic ester or amide or thioester or ketones for  
hair growth compns.)

RN 186268-77-9 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, methyl ester (9CI) (CA INDEX NAME)

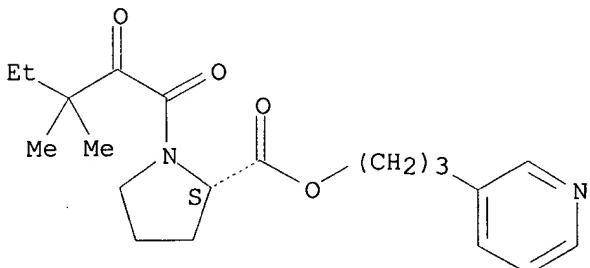
Absolute stereochemistry.



RN 186452-09-5 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3-pyridinyl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L12 ANSWER 11 OF 14 HCPLUS COPYRIGHT 2001 ACS

AN 1999:249062 HCPLUS

DN 130:262139

TI Method for treating hearing loss using sensorineurotrophic compounds  
KATHLEEN FULLER EIC1700 308-4290

IN Magal, Ella  
 PA Amgen Inc., USA  
 SO PCT Int. Appl., 649 pp.  
 CODEN: PIXXD2

DT Patent

LA English

IC A61K035-00

CC 1-11 (Pharmacology)

Section cross-reference(s): 28, 63

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9914998	A2	19990401	WO 1998-US19980	19980924
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM		RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
	ZA 9808720	A	19990329	ZA 1998-8720	19980923
	AU 9895783	A1	19990412	AU 1998-95783	19980924
	EP 1011650	A1	20000628	EP 1998-949467	19980924
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
PRAI	US 1997-59905	P	19970924		
	US 1997-59963	P	19970925		
	US 1998-159105	A	19980923		
	WO 1998-US19980	W	19980924		
OS	MARPAT 130:262139				
AB	Methods are provided for preventing and/or treating injury or degeneration of inner ear sensory cells, e.g. hair cells and auditory neurons, by administration of a sensorineurotrophic compd. to a patient in need thereof. Compd. prepn. is included.				
ST	sensorineurotrophic compd prepn hearing loss treatment				
IT	Ear (ototoxicity; sensorineurotrophic compds., and prepn. thereof, for treating hearing loss)				
IT	Deafness (sensorineural; sensorineurotrophic compds., and prepn. thereof, for treating hearing loss)				
IT	Drug delivery systems				
	Hair cell (organ of Corti)				
	Inner ear (sensorineurotrophic compds., and prepn. thereof, for treating hearing loss)				
IT	FKBP12 (protein) RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (sensorineurotrophic compds., and prepn. thereof, for treating hearing loss)				
IT	Inner ear (vestibular app.; sensorineurotrophic compds., and prepn. thereof, for treating hearing loss)				
IT	104-53-0P, 3-Phenyl-1-propanal 17486-86-1P, 1,5-Diphenyl-3-pentanol 20329-96-8P 21011-66-5P 57293-19-3P 69603-49-2P, 3-Pyridinepropanethiol 88537-44-4P 89113-44-0P 139419-63-9P <b>186268-77-9P</b> 186268-78-0P <b>186452-09-5P</b> 205388-64-3P 205388-65-4P 205388-66-5P 205388-67-6P 205388-68-7P 205448-82-4P 207444-86-8P 210048-37-6P 210048-38-7P 210103-98-3P 210103-99-4P 217186-09-9P 217186-62-4P 222171-23-5P 222171-34-8P 222171-35-9P 222171-38-2P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation) (prepn. and reaction; sensorineurotrophic compds., and prepn. thereof,				

KATHLEEN FULLER EIC1700 308-4290

for treating hearing loss)

IT 222171-82-6P  
 RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (reaction; sensorineurotrophic compds., and prepn. thereof, for treating hearing loss)

IT 62-56-6, Thiourea, reactions 86-81-7, 3,4,5-Trimethoxybenzaldehyde 96-15-1, 2-Methylbutylamine 98-09-9, Benzenesulfonyl chloride 98-59-9, p-Toluenesulfonyl chloride 103-63-9, 2-(Bromoethyl)benzene 108-98-5, Phenyl mercaptan, reactions 122-97-4, 3-Phenyl-1-propanol 543-27-1, Isobutyl chloroformate 955-40-8 1122-82-3, Cyclohexyl isothiocyanate 1939-99-7, .alpha.-Toluenesulfonyl chloride 2133-40-6, L-Proline methyl ester hydrochloride 2859-67-8, 3-(3-Pyridyl)-1-propanol 3173-53-3, Cyclohexyl isocyanate 4830-93-7, 1-Chloro-4-phenylbutane 5406-18-8, 3-(p-Methoxyphenyl)-1-propanol 5781-53-3, Methyloxalyl chloride 7531-52-4, L-Prolinamide 15761-39-4 23356-96-9, (S)-(+)-2-Pyrrolidinemethanol 26250-84-0 28276-08-6, 1,1-Dimethylpropylmagnesium chloride 32559-18-5, Methyl pipecolate hydrochloride 64369-68-2  
 222171-36-0 222171-37-1  
 RL: RCT (Reactant)  
 (reaction; sensorineurotrophic compds., and prepn. thereof, for treating hearing loss)

IT 1404-04-2, Neomycin 1405-10-3, Neomycin sulfate 15663-27-1, Cisplatin  
 RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BIOL (Biological study)  
 (sensorineurotrophic compds., and prepn. thereof, for treating hearing loss)

IT 222171-57-5P 222171-84-8P  
 RL: BAC (Biological activity or effector, except adverse); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (sensorineurotrophic compds., and prepn. thereof, for treating hearing loss)

IT 88425-46-1P 186268-50-8P 186268-51-9P  
 186268-52-0P 186268-53-1P 186268-54-2P  
 186268-56-4P 186268-57-5P 186268-58-6P  
 186268-63-3P 186268-64-4P 186268-65-5P  
 186268-66-6P 186268-67-7P 186268-68-8P  
 186452-05-1P 186452-06-2P 186452-07-3P  
 186452-08-4P 186452-10-8P 186452-11-9P  
 186452-12-0P 186452-13-1P 186452-14-2P  
 186452-15-3P 186452-16-4P 186452-17-5P  
 186452-18-6P 186452-19-7P 186452-20-0P  
 205388-13-2P 205388-14-3P 205388-15-4P 205448-79-9P 205448-80-2P  
 210048-11-6P 210048-13-8P 210048-25-2P 210103-54-1P 210103-55-2P  
 210103-60-9P 222171-28-0P 222171-58-6P 222171-83-7P 222171-85-9P  
 RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (sensorineurotrophic compds., and prepn. thereof, for treating hearing loss)

IT 141084-63-1 152754-34-2 152754-35-3 152754-36-4 152754-38-6  
 152754-42-2 155668-51-2 155668-53-4 155668-86-3 157757-22-7  
 186268-50-8D, esters 186268-51-9D, esters  
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 186268-58-6D, esters 186268-59-7 186268-59-7D,  
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 186268-62-2 186268-62-2D, esters 186268-63-3D,  
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 186268-66-6D, esters 186268-67-7D, esters  
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 186268-75-7 186268-75-7D, esters 186268-76-8  
 186268-76-8D, esters 186268-78-0D, esters 186452-05-1D  
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 186452-08-4D, esters 186452-09-5D, esters  
 186452-10-8D, esters 186452-11-9D, esters  
 186452-12-0D, esters 186452-14-2D, esters  
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 186452-17-5D, esters 186452-18-6D, esters  
 186452-19-7D, esters 186452-20-0D, esters  
 186452-22-2 186452-22-2D, esters 186452-23-3  
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 186834-71-9 186834-72-0 186834-73-1 186834-74-2 186834-75-3  
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 186834-79-7 186834-80-0 186834-81-1 186834-82-2 186834-83-3  
 186834-84-4 186834-85-5 186834-86-6 186834-87-7 186834-88-8  
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 205388-20-1 205388-22-3 205388-23-4 205388-24-5 205388-25-6  
 205388-26-7 205388-27-8 205388-28-9 205388-29-0 205388-30-3  
 205388-30-3D, esters 205388-31-4 205388-32-5 205388-33-6  
 205388-34-7 205388-35-8 205388-36-9 205388-37-0 205388-38-1  
 205388-39-2 205388-41-6 205388-42-7 205388-43-8 205388-44-9  
 205388-45-0 205388-47-2 205388-48-3 205388-49-4 205388-50-7  
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 210048-24-1 210048-30-9 210048-30-9D, esters 210103-56-3  
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 212607-83-5D, esters 217178-10-4 217179-46-9 217179-50-5  
 217180-44-4 217180-90-0 217186-52-2 217186-53-3 217186-54-4  
 217186-55-5 217186-56-6 217186-57-7 222171-24-6 222171-25-7  
 222171-27-9 222171-29-1 222171-30-4 222171-31-5 222171-32-6  
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 222171-41-7 222171-41-7D, esters 222171-42-8 222171-42-8D, esters  
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 222171-50-8D, esters 222171-51-9 222171-51-9D, esters 222171-52-0  
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 222171-54-2D, esters 222171-55-3

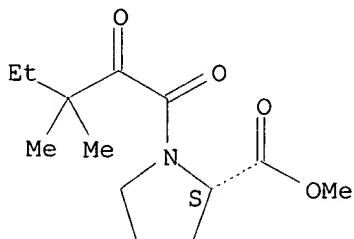
RL: BAC (Biological activity or effector, except adverse); THU  
 (Therapeutic use); BIOL (Biological study); USES (Uses)

(sensorineurotrophic compds., and prepn. thereof, for treating hearing  
 loss)

- IT 95076-93-0, Peptidyl-prolyl isomerase  
 RL: BPR (Biological process); BIOL (Biological study); PROC (Process)  
 (sensorineurotrophic compds., and prepn. thereof, for treating hearing  
 loss)
- IT 1504-56-9P 53560-26-2P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (sensorineurotrophic compds., and prepn. thereof, for treating hearing  
 loss)
- IT 186268-77-9P 186452-09-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and reaction; sensorineurotrophic compds., and prepn. thereof,  
 for treating hearing loss)
- RN 186268-77-9 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, methyl ester (9CI) (CA INDEX NAME)

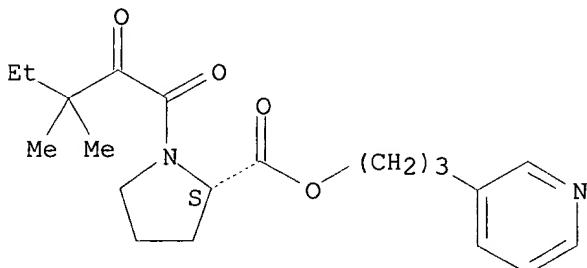
Absolute stereochemistry.



RN 186452-09-5 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3-pyridinyl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



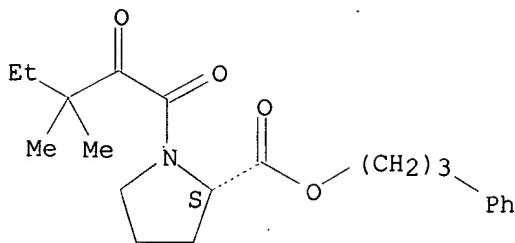
IT 186268-50-8P 186268-51-9P 186268-52-0P  
 186268-53-1P 186268-54-2P 186268-56-4P  
 186268-57-5P 186268-58-6P 186268-63-3P  
 186268-64-4P 186268-65-5P 186268-66-6P  
 186268-67-7P 186268-68-8P 186452-05-1P  
 186452-06-2P 186452-07-3P 186452-08-4P  
 186452-10-8P 186452-11-9P 186452-12-0P  
 186452-13-1P 186452-14-2P 186452-15-3P  
 186452-16-4P 186452-17-5P 186452-18-6P  
 186452-19-7P 186452-20-0P

RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (sensorineurotrophic compds., and prepn. thereof, for treating hearing loss)

RN 186268-50-8 HCPLUS

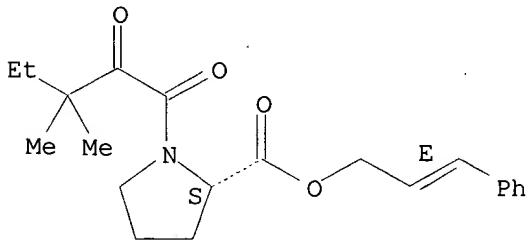
CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



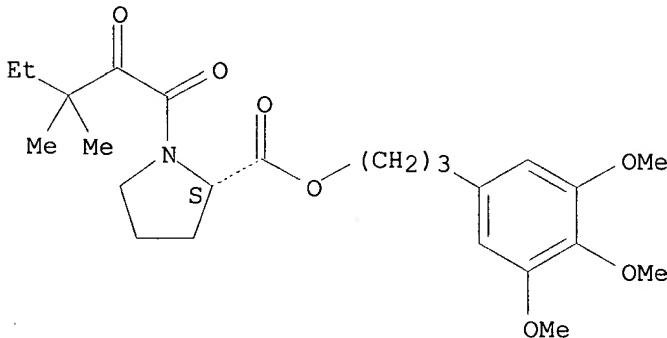
RN 186268-51-9 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-phenyl-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry as shown.



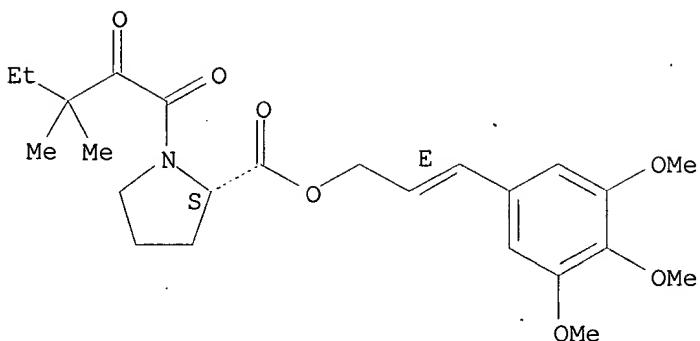
RN 186268-52-0 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3,4,5-trimethoxyphenyl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 186268-53-1 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-(3,4,5-trimethoxyphenyl)-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry as shown.

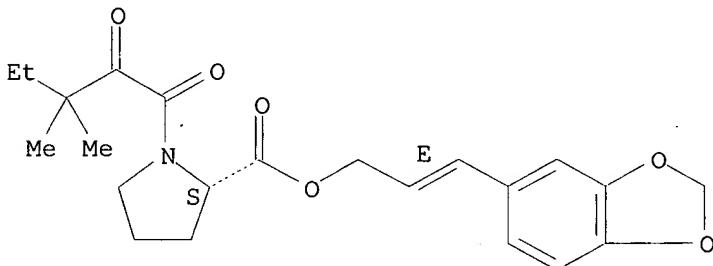


RN 186268-54-2 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-(1,3-benzodioxol-5-yl)-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

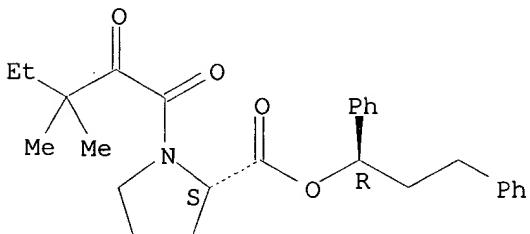
Double bond geometry as shown.



RN 186268-56-4 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1R)-1,3-diphenylpropyl ester (9CI) (CA INDEX NAME)

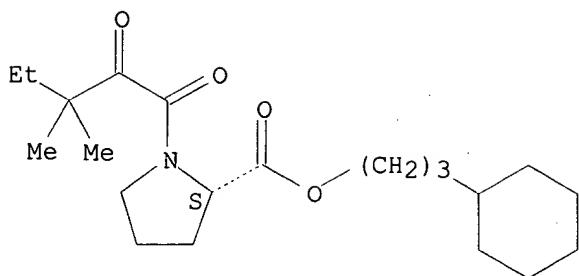
Absolute stereochemistry.



RN 186268-57-5 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-cyclohexylpropyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

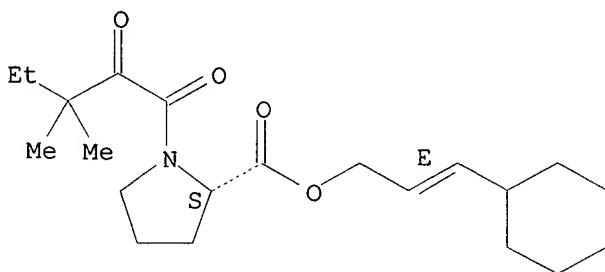


RN 186268-58-6 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-cyclohexyl-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

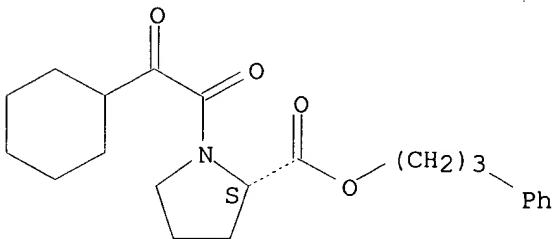
Double bond geometry as shown.



RN 186268-63-3 HCPLUS

CN L-Proline, 1-(cyclohexyloxooacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

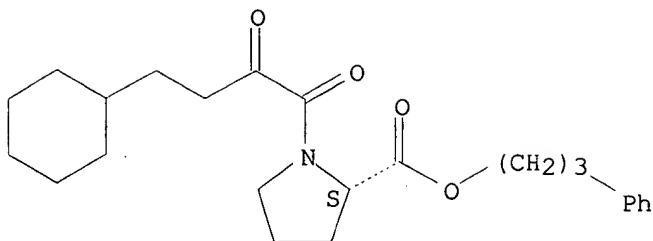
Absolute stereochemistry.



RN 186268-64-4 HCPLUS

CN L-Proline, 1-(4-cyclohexyl-1,2-dioxobutyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

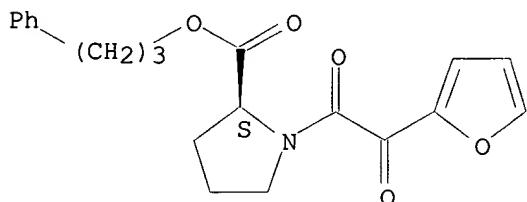
Absolute stereochemistry.



RN 186268-65-5 HCPLUS

CN L-Proline, 1-(2-furanyloxoacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

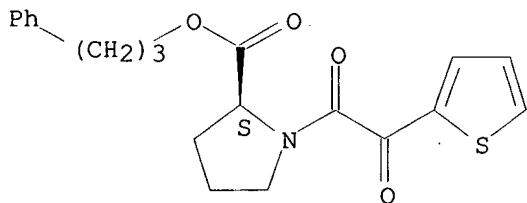
Absolute stereochemistry.



RN 186268-66-6 HCPLUS

CN L-Proline, 1-(oxo-2-thienylacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

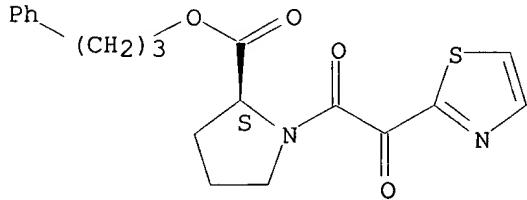
Absolute stereochemistry.



RN 186268-67-7 HCPLUS

CN L-Proline, 1-(oxo-2-thiazolylacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

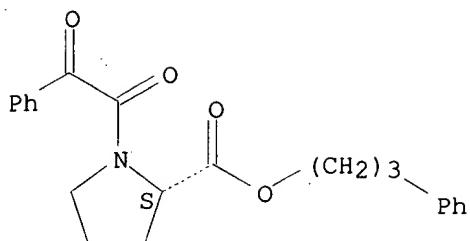
Absolute stereochemistry.



RN 186268-68-8 HCPLUS

CN L-Proline, 1-(oxophenylacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

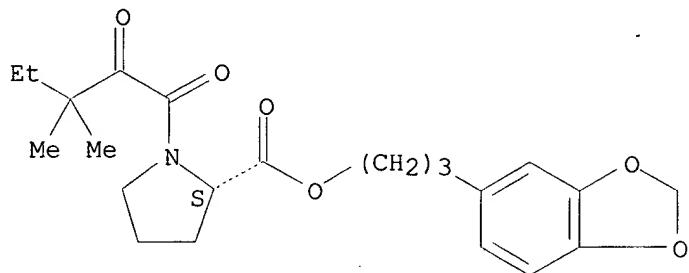
Absolute stereochemistry.



RN 186452-05-1 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(1,3-benzodioxol-5-yl)propyl ester (9CI) (CA INDEX NAME)

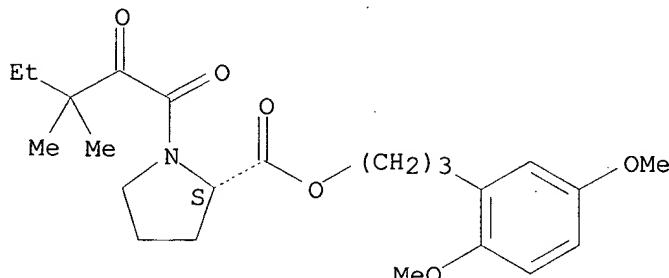
Absolute stereochemistry.



RN 186452-06-2 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(2,5-dimethoxyphenyl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

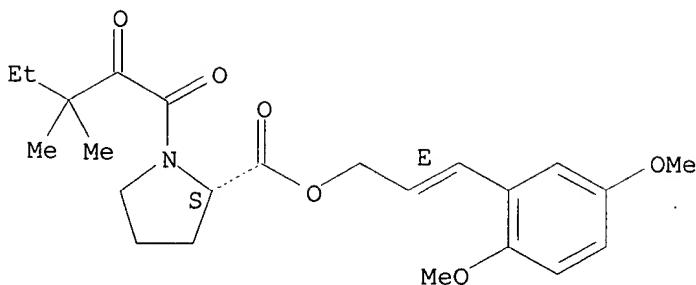


RN 186452-07-3 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-(2,5-dimethoxyphenyl)-2-propenyl ester (9CI) (CA INDEX NAME)

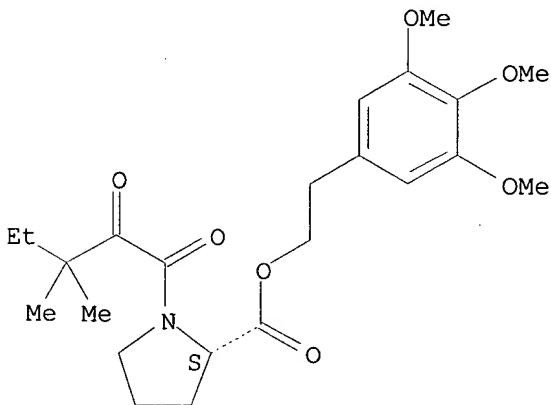
Absolute stereochemistry.

Double bond geometry as shown.



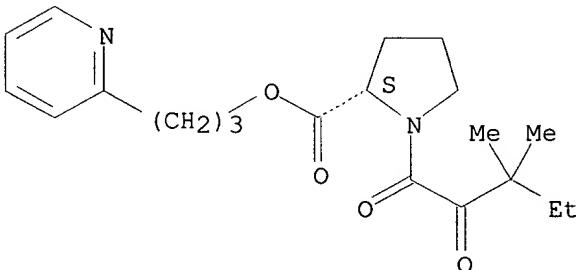
RN 186452-08-4 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 2-(3,4,5-trimethoxyphenyl)ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



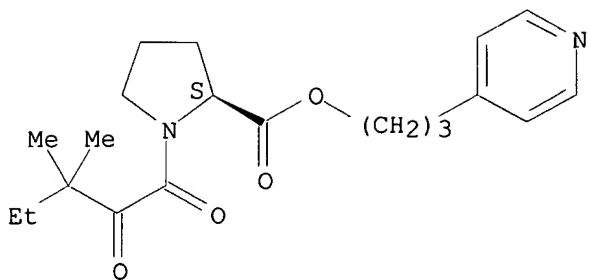
RN 186452-10-8 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(2-pyridinyl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 186452-11-9 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(4-pyridinyl)propyl ester (9CI) (CA INDEX NAME)

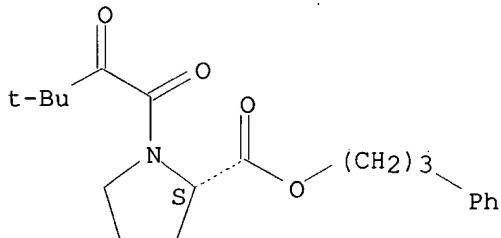
Absolute stereochemistry.



RN 186452-12-0 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxobutyl)-, 3-phenylpropyl ester (9CI)  
(CA INDEX NAME)

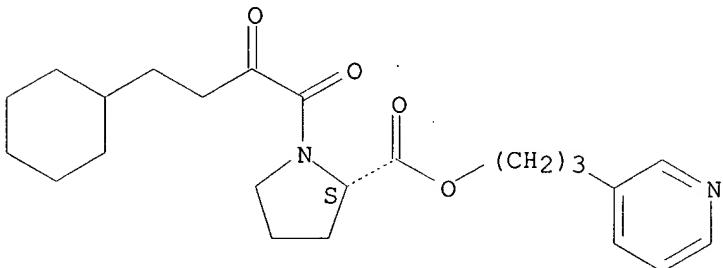
Absolute stereochemistry.



RN 186452-13-1 HCAPLUS

CN L-Proline, 1-(4-cyclohexyl-1,2-dioxobutyl)-, 3-(3-pyridinyl)propyl ester  
(9CI) (CA INDEX NAME)

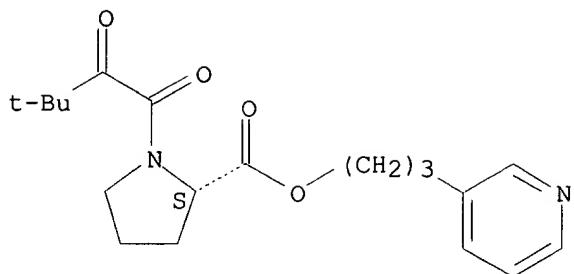
Absolute stereochemistry.



RN 186452-14-2 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxobutyl)-, 3-(3-pyridinyl)propyl ester  
(9CI) (CA INDEX NAME)

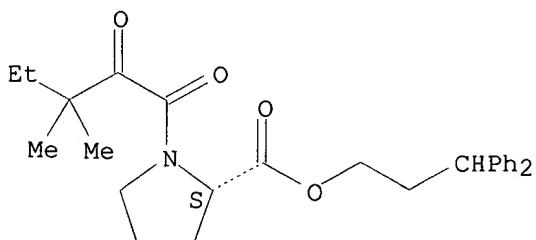
Absolute stereochemistry.



RN 186452-15-3 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3,3-diphenylpropyl ester  
(9CI) (CA INDEX NAME)

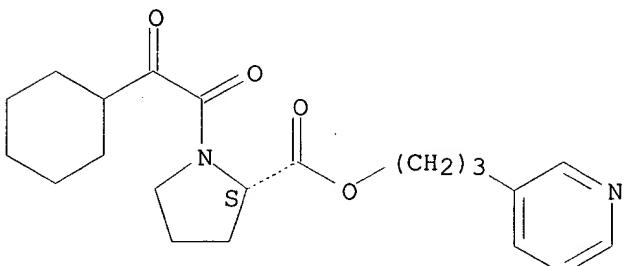
Absolute stereochemistry.



RN 186452-16-4 HCAPLUS

CN L-Proline, 1-(cyclohexyloxooacetyl)-, 3-(3-pyridinyl)propyl ester (9CI)  
(CA INDEX NAME)

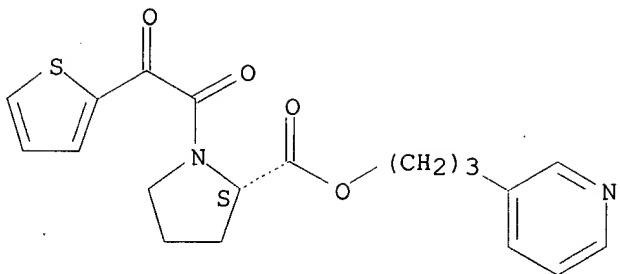
Absolute stereochemistry.



RN 186452-17-5 HCAPLUS

CN L-Proline, 1-(oxo-2-thienylacetyl)-, 3-(3-pyridinyl)propyl ester (9CI)  
(CA INDEX NAME)

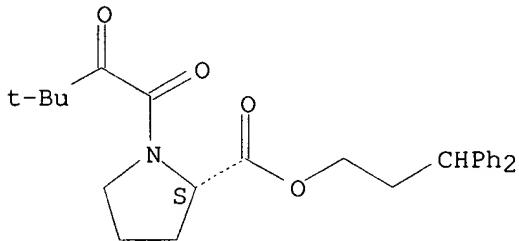
Absolute stereochemistry.



RN 186452-18-6 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxobutyl)-, 3,3-diphenylpropyl ester  
(9CI) (CA INDEX NAME)

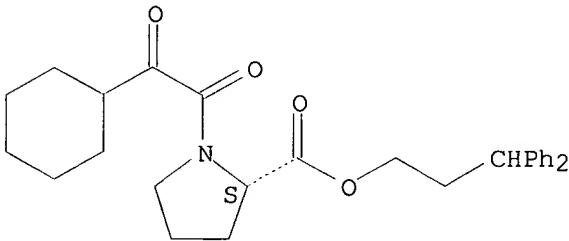
Absolute stereochemistry.



RN 186452-19-7 HCAPLUS

CN L-Proline, 1-(cyclohexyloxooacetyl)-, 3,3-diphenylpropyl ester (9CI) (CA INDEX NAME)

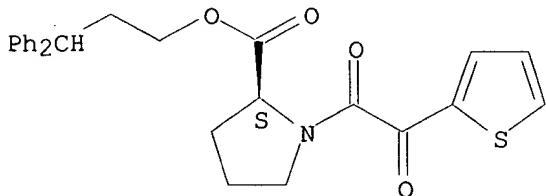
Absolute stereochemistry.



RN 186452-20-0 HCAPLUS

CN L-Proline, 1-(oxo-2-thienylacetyl)-, 3,3-diphenylpropyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 186268-50-8D, esters 186268-51-9D, esters  
186268-52-0D, esters 186268-53-1D, esters

KATHLEEN FULLER EIC1700 308-4290

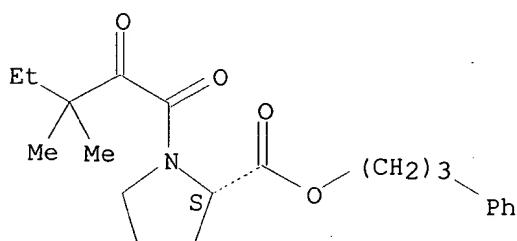
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 186268-62-2 186268-62-2D, esters 186268-63-3D,  
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 186268-68-8D, esters 186268-69-9 186268-69-9D,  
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 186268-71-3 186268-71-3D, esters 186268-72-4  
 186268-72-4D, esters 186268-73-5 186268-73-5D,  
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 186268-75-7 186268-75-7D, esters 186268-76-8  
 186268-76-8D, esters 186452-05-1D, esters  
 186452-06-2D, esters 186452-07-3D, esters  
 186452-08-4D, esters 186452-09-5D, esters  
 186452-10-8D, esters 186452-11-9D, esters  
 186452-12-0D, esters 186452-14-2D, esters  
 186452-15-3D, esters 186452-16-4D, esters  
 186452-17-5D, esters 186452-18-6D, esters  
 186452-19-7D, esters 186452-20-0D, esters  
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 186452-23-3D, esters 186452-25-5 186452-25-5D,  
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 222171-44-0 222171-44-0D, esters 222171-45-1  
 222171-45-1D, esters

RL: BAC (Biological activity or effector, except adverse); THU  
 (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (sensorineurotrophic compds., and prepns. thereof, for treating hearing  
 loss)

RN 186268-50-8 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-phenylpropyl ester (9CI)  
 (CA INDEX NAME)

Absolute stereochemistry.

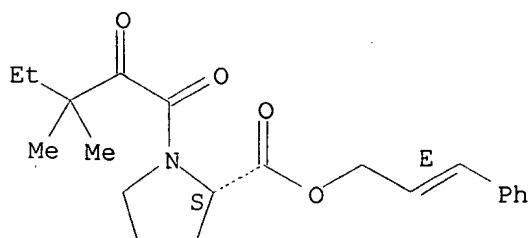


RN 186268-51-9 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-phenyl-2-propenyl  
 ester (9CI) (CA INDEX NAME)

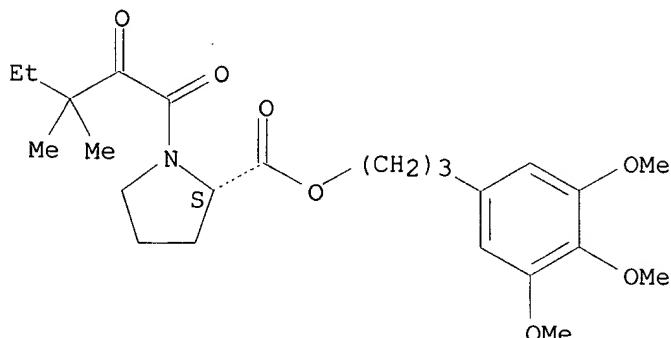
Absolute stereochemistry.

Double bond geometry as shown.



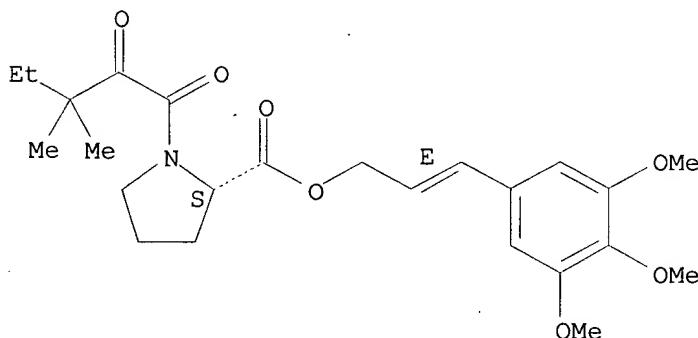
RN 186268-52-0 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3,4,5-trimethoxyphenyl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



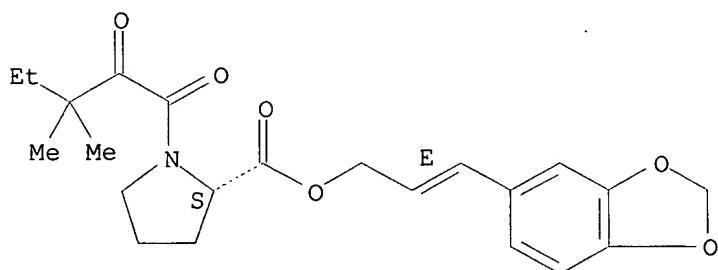
RN 186268-53-1 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-(3,4,5-trimethoxyphenyl)-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry as shown.



RN 186268-54-2 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-(1,3-benzodioxol-5-yl)-2-propenyl ester (9CI) (CA INDEX NAME)

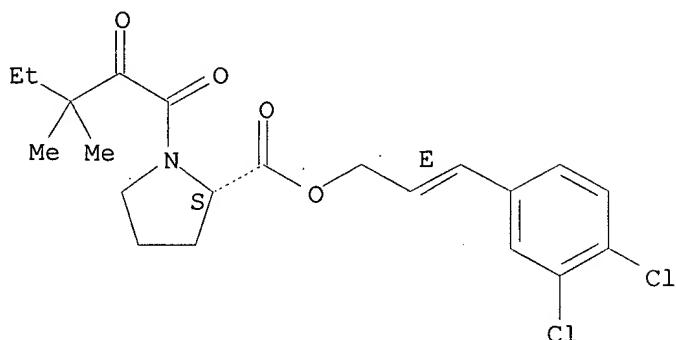
Absolute stereochemistry.  
 Double bond geometry as shown.



RN 186268-55-3 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-(3,4-dichlorophenyl)-2-propenyl ester (9CI) (CA INDEX NAME)

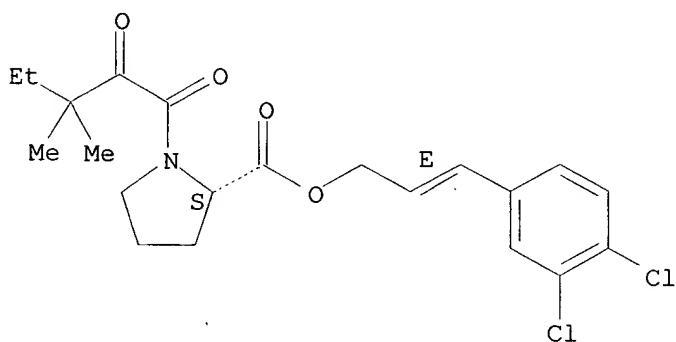
KATHLEEN FULLER EIC1700 308-4290

Absolute stereochemistry.  
Double bond geometry as shown.



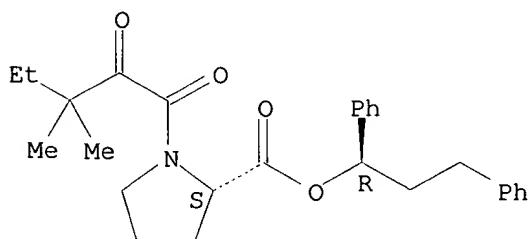
RN 186268-55-3 HCPLUS  
CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-(3,4-dichlorophenyl)-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.



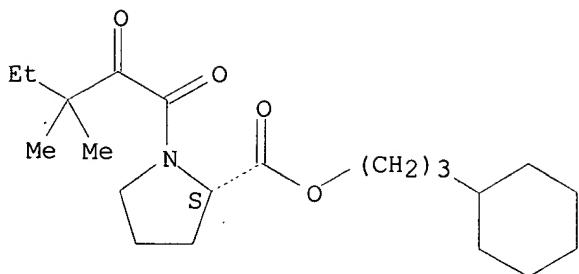
RN 186268-56-4 HCPLUS  
CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1R)-1,3-diphenylpropyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 186268-57-5 HCPLUS  
CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-cyclohexylpropyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

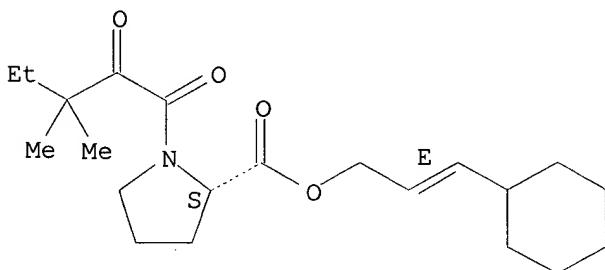


RN 186268-58-6 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-cyclohexyl-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

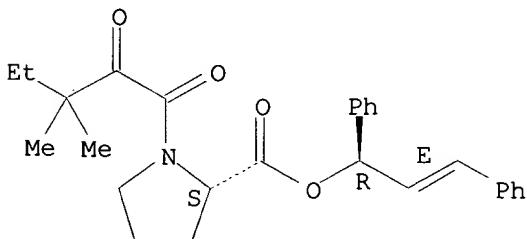


RN 186268-59-7 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1R,2E)-1,3-diphenyl-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

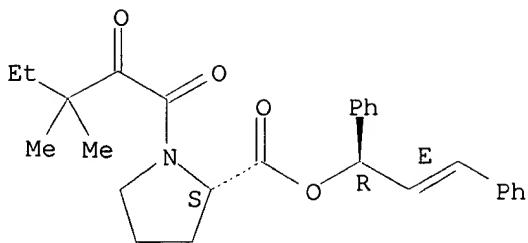


RN 186268-59-7 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1R,2E)-1,3-diphenyl-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

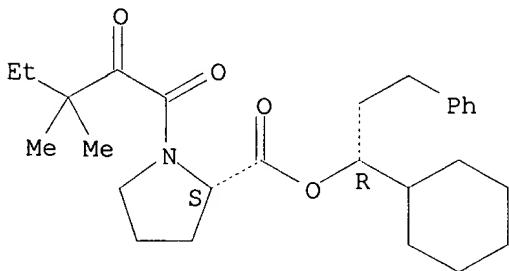
Double bond geometry as shown.



RN 186268-60-0 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1R)-1-cyclohexyl-3-phenylpropyl ester (9CI) (CA INDEX NAME)

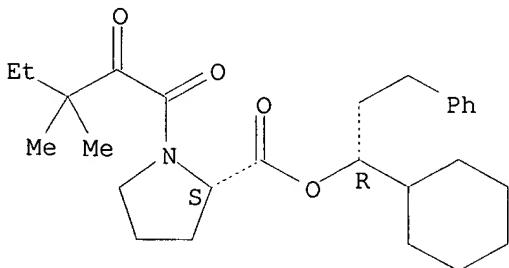
Absolute stereochemistry.



RN 186268-60-0 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1R)-1-cyclohexyl-3-phenylpropyl ester (9CI) (CA INDEX NAME)

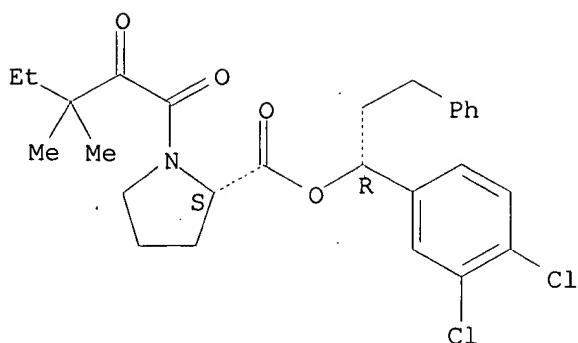
Absolute stereochemistry.



RN 186268-62-2 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1R)-1-(3,4-dichlorophenyl)-3-phenylpropyl ester (9CI) (CA INDEX NAME)

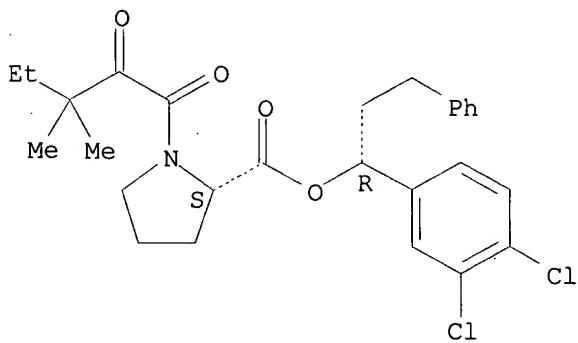
Absolute stereochemistry.



RN 186268-62-2 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1R)-1-(3,4-dichlorophenyl)-3-phenylpropyl ester (9CI) (CA INDEX NAME)

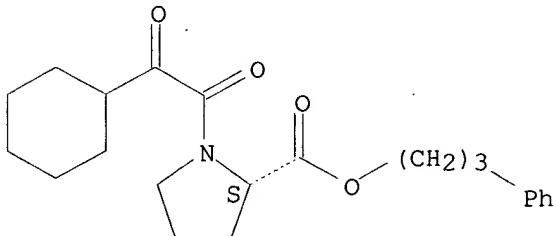
Absolute stereochemistry.



RN 186268-63-3 HCPLUS

CN L-Proline, 1-(cyclohexyloxooacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

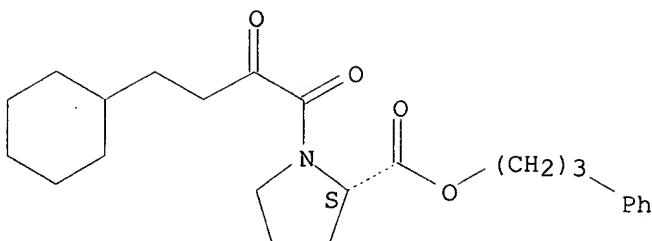
Absolute stereochemistry.



RN 186268-64-4 HCPLUS

CN L-Proline, 1-(4-cyclohexyl-1,2-dioxobutyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

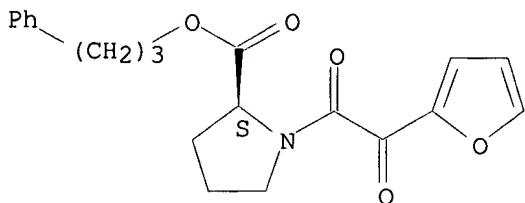
Absolute stereochemistry.



RN 186268-65-5 HCPLUS

CN L-Proline, 1-(2-furanyloxoacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

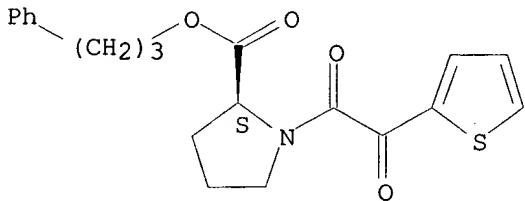
Absolute stereochemistry.



RN 186268-66-6 HCPLUS

CN L-Proline, 1-(oxo-2-thienylacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

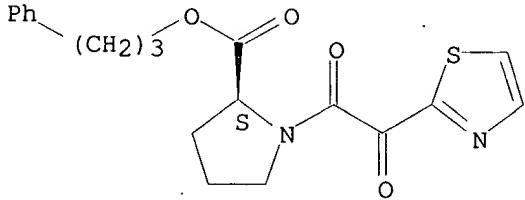
Absolute stereochemistry.



RN 186268-67-7 HCPLUS

CN L-Proline, 1-(oxo-2-thiazolylacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

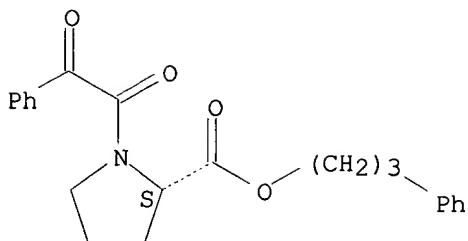
Absolute stereochemistry.



RN 186268-68-8 HCPLUS

CN L-Proline, 1-(oxophenylacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

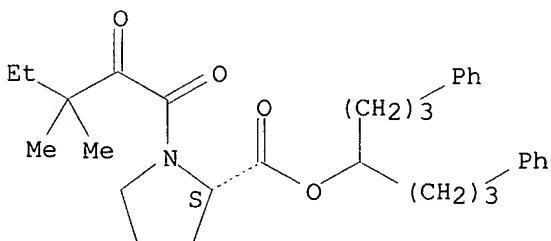
Absolute stereochemistry.



RN 186268-69-9 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 4-phenyl-1-(3-phenylpropyl)butyl ester (9CI) (CA INDEX NAME)

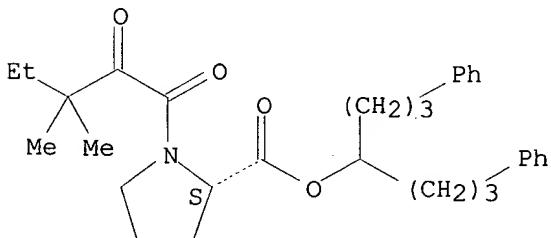
Absolute stereochemistry.



RN 186268-69-9 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 4-phenyl-1-(3-phenylpropyl)butyl ester (9CI) (CA INDEX NAME)

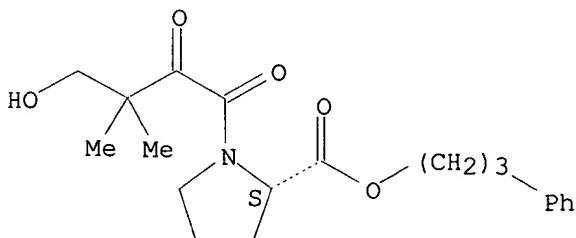
Absolute stereochemistry.



RN 186268-70-2 HCPLUS

CN L-Proline, 1-(4-hydroxy-3,3-dimethyl-1,2-dioxobutyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

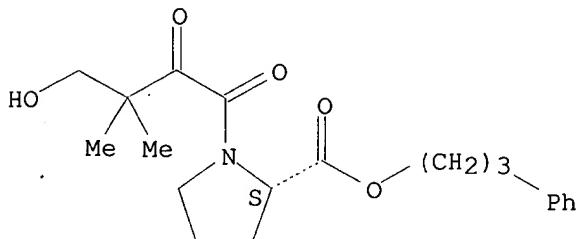


RN 186268-70-2 HCPLUS

KATHLEEN FULLER EIC1700 308-4290

CN L-Proline, 1-(4-hydroxy-3,3-dimethyl-1,2-dioxobutyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

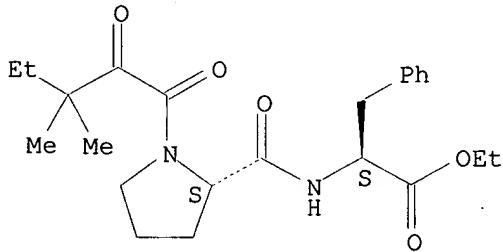
Absolute stereochemistry.



RN 186268-71-3 HCPLUS

CN L-Phenylalanine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, ethyl ester (9CI) (CA INDEX NAME)

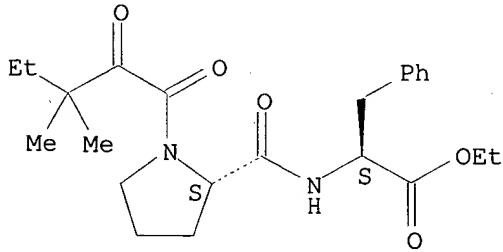
Absolute stereochemistry.



RN 186268-71-3 HCPLUS

CN L-Phenylalanine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, ethyl ester (9CI) (CA INDEX NAME)

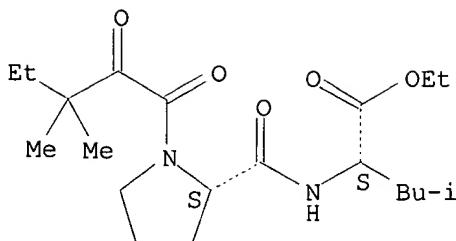
Absolute stereochemistry.



RN 186268-72-4 HCPLUS

CN L-Leucine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, ethyl ester (9CI) (CA INDEX NAME)

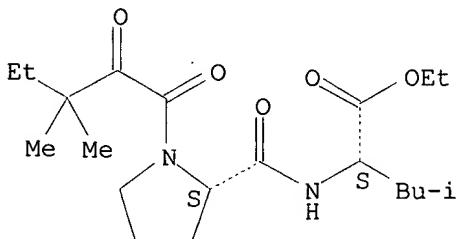
Absolute stereochemistry.



RN 186268-72-4 HCAPLUS

CN L-Leucine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, ethyl ester (9CI)  
(CA INDEX NAME)

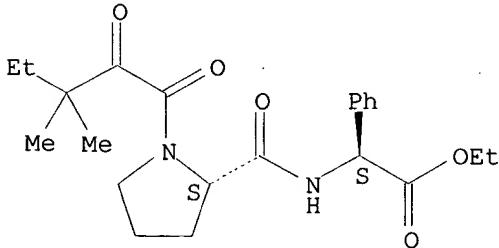
Absolute stereochemistry.



RN 186268-73-5 HCAPLUS

CN Glycine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-2-phenyl-, ethyl ester,  
(2S)- (9CI) (CA INDEX NAME)

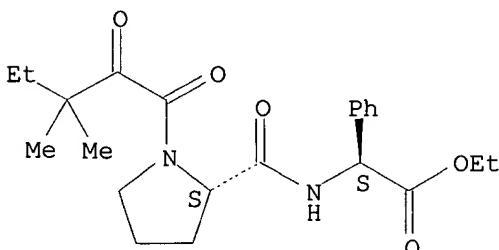
Absolute stereochemistry.



RN 186268-73-5 HCAPLUS

CN Glycine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-2-phenyl-, ethyl ester,  
(2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

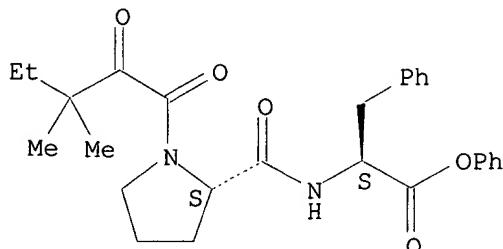


RN 186268-74-6 HCAPLUS

KATHLEEN FULLER EIC1700 308-4290

CN L-Phenylalanine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, phenyl ester  
 (9CI) (CA INDEX NAME)

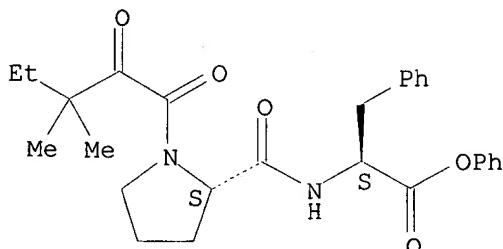
Absolute stereochemistry.



RN 186268-74-6 HCPLUS

CN L-Phenylalanine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, phenyl ester  
 (9CI) (CA INDEX NAME)

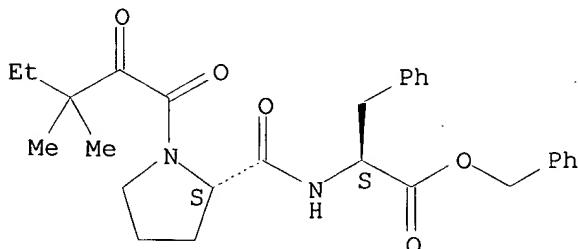
Absolute stereochemistry.



RN 186268-75-7 HCPLUS

CN L-Phenylalanine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, phenylmethyl ester (9CI) (CA INDEX NAME)

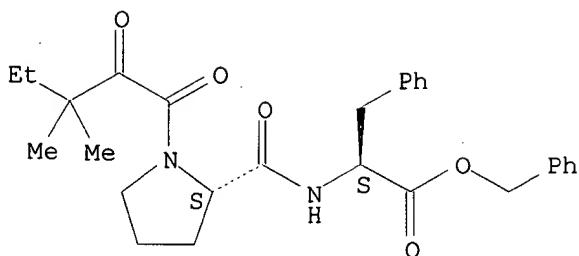
Absolute stereochemistry.



RN 186268-75-7 HCPLUS

CN L-Phenylalanine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, phenylmethyl ester (9CI) (CA INDEX NAME)

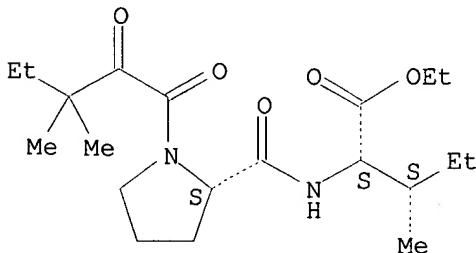
Absolute stereochemistry.



RN 186268-76-8 HCPLUS

CN L-Isoleucine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, ethyl ester  
(9CI) (CA INDEX NAME)

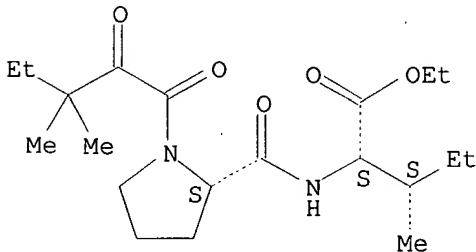
Absolute stereochemistry.



RN 186268-76-8 HCPLUS

CN L-Isoleucine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, ethyl ester  
(9CI) (CA INDEX NAME)

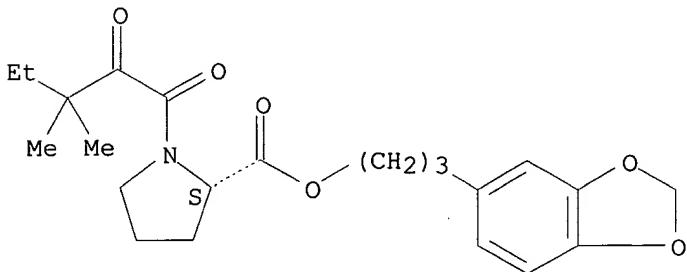
Absolute stereochemistry.



RN 186452-05-1 HCPLUS

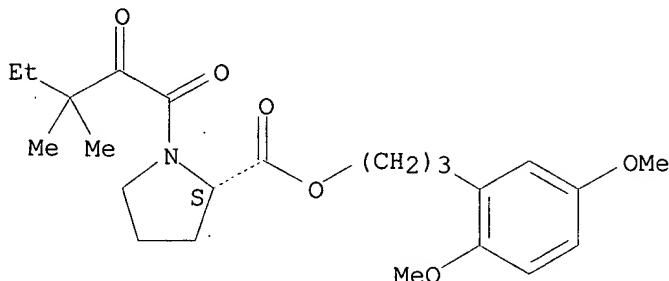
CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(1,3-benzodioxol-5-yl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



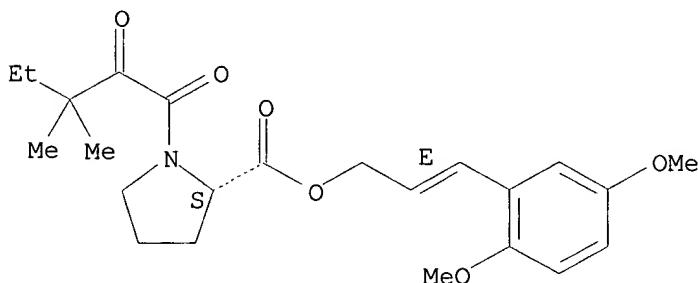
RN 186452-06-2 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(2,5-dimethoxyphenyl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



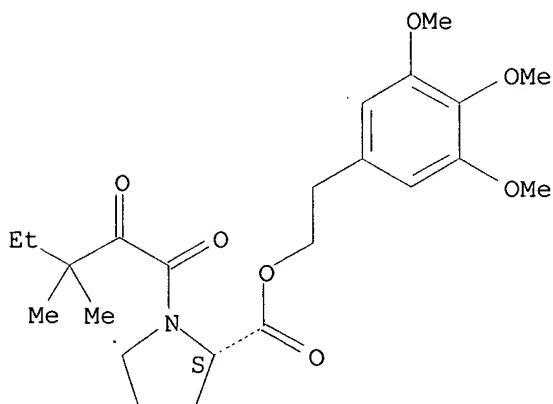
RN 186452-07-3 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-(2,5-dimethoxyphenyl)-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry as shown.



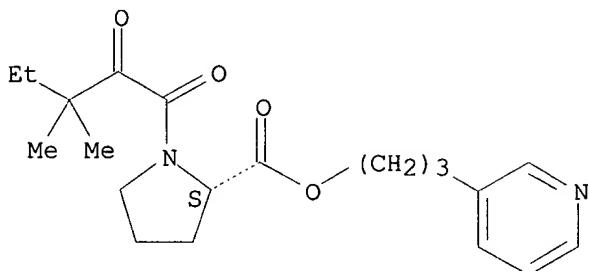
RN 186452-08-4 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 2-(3,4,5-trimethoxyphenyl)ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 186452-09-5 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3-pyridinyl)propyl ester (9CI) (CA INDEX NAME)

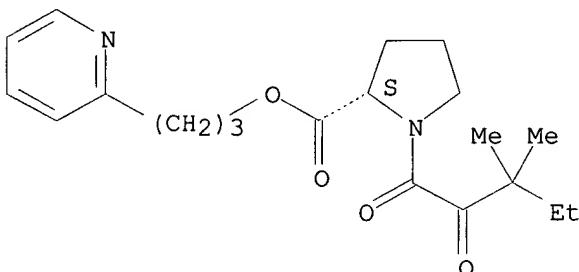
Absolute stereochemistry.



RN 186452-10-8 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(2-pyridinyl)propyl ester  
(9CI) (CA INDEX NAME)

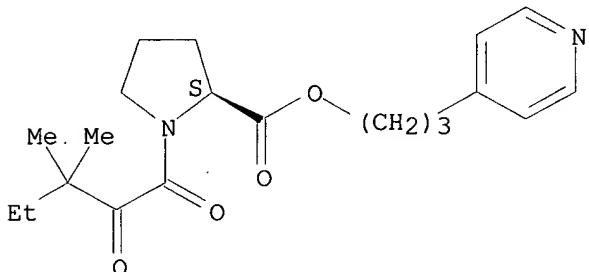
Absolute stereochemistry.



RN 186452-11-9 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(4-pyridinyl)propyl ester  
(9CI) (CA INDEX NAME)

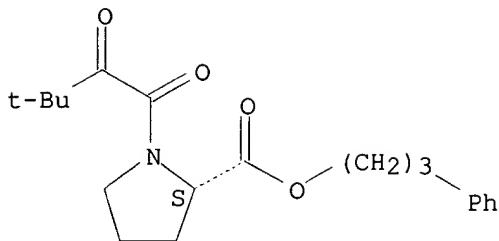
Absolute stereochemistry.



RN 186452-12-0 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxobutyl)-, 3-phenylpropyl ester (9CI)  
(CA INDEX NAME)

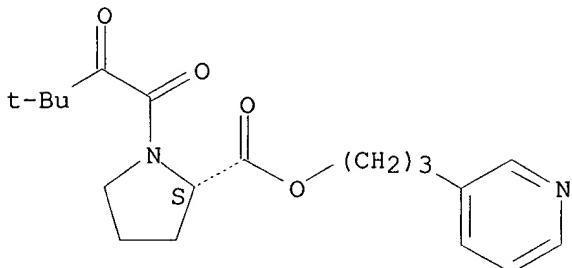
Absolute stereochemistry.



RN 186452-14-2 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxobutyl)-, 3-(3-pyridinyl)propyl ester  
(9CI) (CA INDEX NAME)

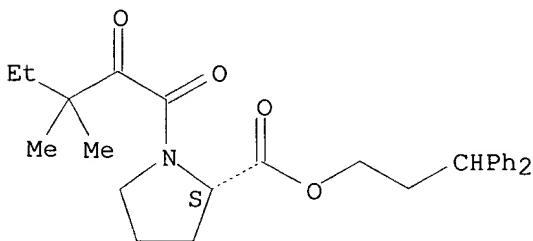
Absolute stereochemistry.



RN 186452-15-3 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3,3-diphenylpropyl ester  
(9CI) (CA INDEX NAME)

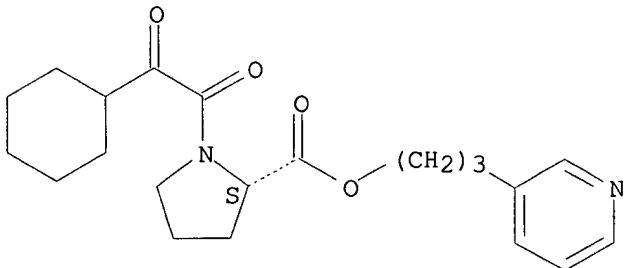
Absolute stereochemistry.



RN 186452-16-4 HCAPLUS

CN L-Proline, 1-(cyclohexyloxooacetyl)-, 3-(3-pyridinyl)propyl ester (9CI)  
(CA INDEX NAME)

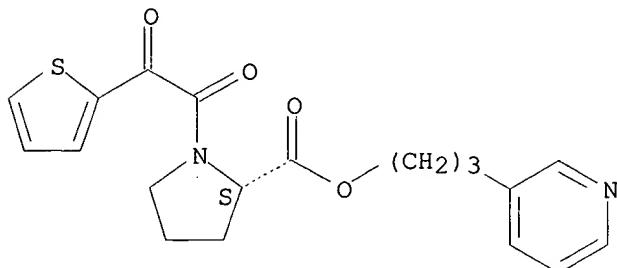
Absolute stereochemistry.



RN 186452-17-5 HCAPLUS

CN L-Proline, 1-(oxo-2-thienylacetyl)-, 3-(3-pyridinyl)propyl ester (9CI)  
(CA INDEX NAME)

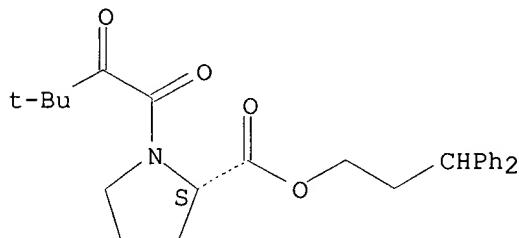
Absolute stereochemistry.



RN 186452-18-6 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxobutyl)-, 3,3-diphenylpropyl ester  
(9CI) (CA INDEX NAME)

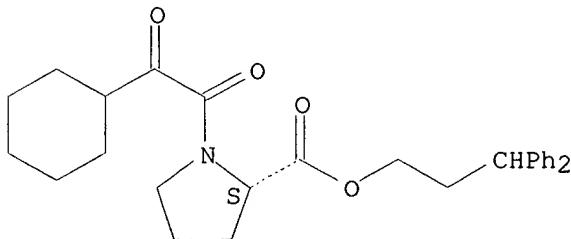
Absolute stereochemistry.



RN 186452-19-7 HCAPLUS

CN L-Proline, 1-(cyclohexyloxooacetyl)-, 3,3-diphenylpropyl ester (9CI) (CA  
INDEX NAME)

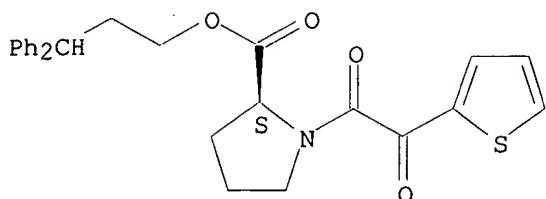
Absolute stereochemistry.



RN 186452-20-0 HCAPLUS

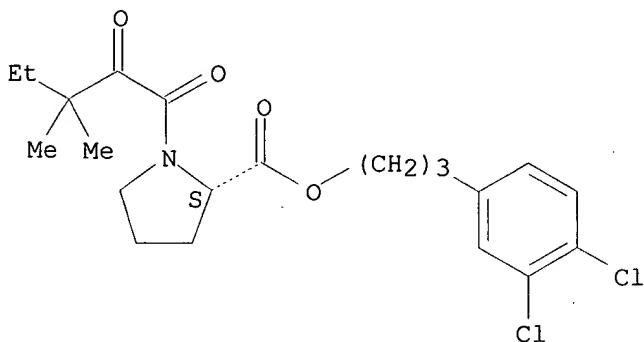
CN L-Proline, 1-(oxo-2-thienylacetyl)-, 3,3-diphenylpropyl ester (9CI) (CA  
INDEX NAME)

Absolute stereochemistry.



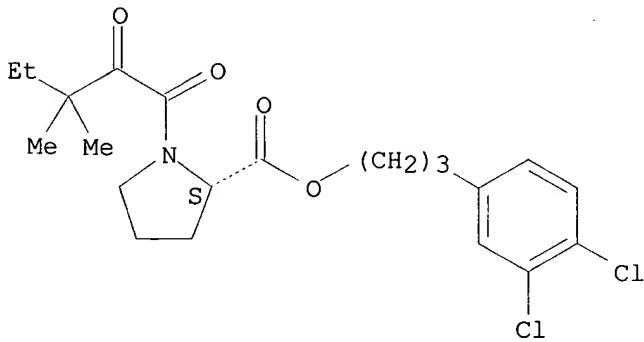
RN 186452-22-2 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3,4-dichlorophenyl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



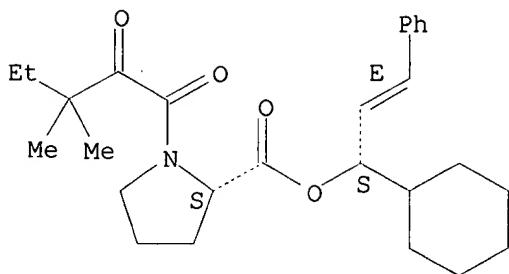
RN 186452-22-2 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3,4-dichlorophenyl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 186452-23-3 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1S,2E)-1-cyclohexyl-3-phenyl-2-propenyl ester (9CI) (CA INDEX NAME)

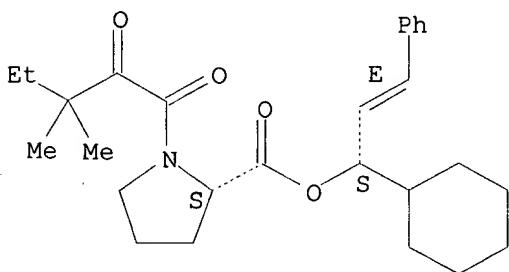
Absolute stereochemistry.  
 Double bond geometry as shown.



RN 186452-23-3 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1S,2E)-1-cyclohexyl-3-phenyl-2-propenyl ester (9CI) (CA INDEX NAME)

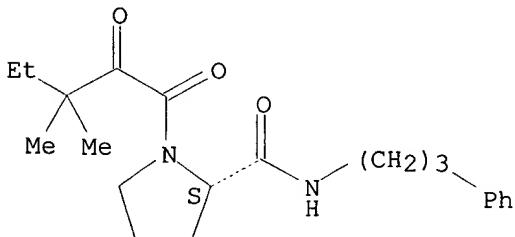
Absolute stereochemistry.  
Double bond geometry as shown.



RN 186452-25-5 HCPLUS

CN 2-Pyrrolidinecarboxamide, 1-(3,3-dimethyl-1,2-dioxopentyl)-N-(3-phenylpropyl)-, (2S)- (9CI) (CA INDEX NAME)

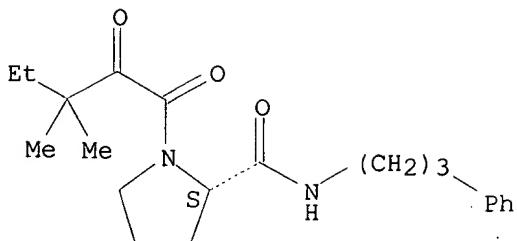
Absolute stereochemistry.



RN 186452-25-5 HCPLUS

CN 2-Pyrrolidinecarboxamide, 1-(3,3-dimethyl-1,2-dioxopentyl)-N-(3-phenylpropyl)-, (2S)- (9CI) (CA INDEX NAME)

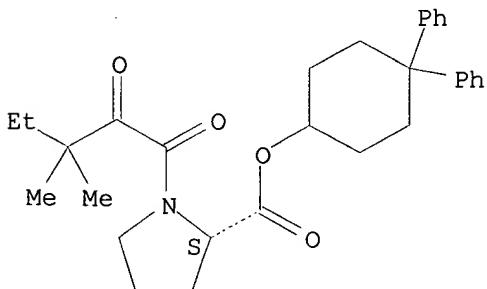
Absolute stereochemistry.



RN 222171-43-9 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 4,4-diphenylcyclohexyl ester  
(9CI) (CA INDEX NAME)

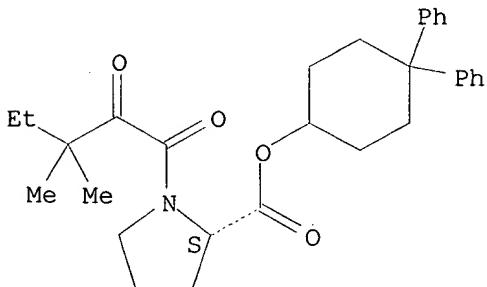
Absolute stereochemistry.



RN 222171-43-9 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 4,4-diphenylcyclohexyl ester  
(9CI) (CA INDEX NAME)

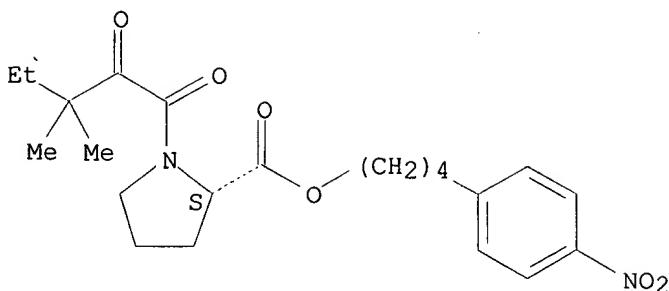
Absolute stereochemistry.



RN 222171-44-0 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 4-(4-nitrophenyl)butyl ester  
(9CI) (CA INDEX NAME)

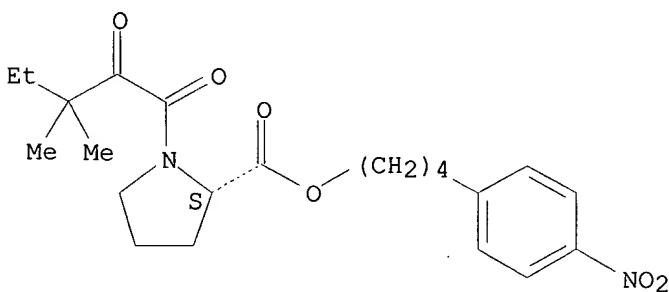
Absolute stereochemistry.



RN 222171-44-0 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 4-(4-nitrophenyl)butyl ester  
(9CI) (CA INDEX NAME)

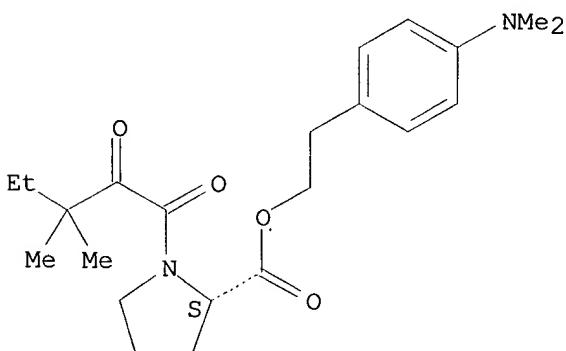
Absolute stereochemistry.



RN 222171-45-1 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 2-[4-(dimethylamino)phenyl]ethyl ester (9CI) (CA INDEX NAME)

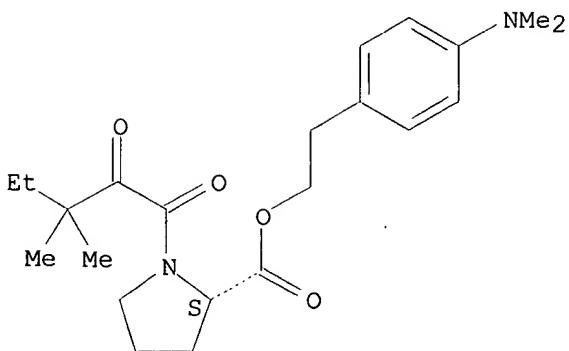
Absolute stereochemistry.



RN 222171-45-1 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 2-[4-(dimethylamino)phenyl]ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L12 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2001 ACS  
 AN 1998:804156 HCAPLUS

DN 130:56975

TI Hair growth compositions containing pyrrolidine derivatives

IN Hamilton, Gregory S.; Steiner, Joseph P.

PA Guilford Pharmaceuticals Inc., USA

SO PCT Int. Appl., 100 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K007-48

ICS A61K031-40; A61K031-44

CC 62-3 (Essential Oils and Cosmetics)

Section cross-reference(s): 27, 63

FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9855091	A1	19981210	WO 1998-US11246	19980603
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5945441	A	19990831	US 1997-869426	19970604
	ZA 9804621	A	19981204	ZA 1998-4621	19980529
	ZA 9804778	A	19981204	ZA 1998-4778	19980603
	ZA 9804783	A	19981204	ZA 1998-4783	19980603
	AU 9877169	A1	19981221	AU 1998-77169	19980603
	EP 998263	A1	20000510	EP 1998-925154	19980603
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 6239164	B1	20010529	US 1999-369860	19990809

PRAI US 1997-869426 A 19970604  
 WO 1998-US11246 W 19980603

OS MARPAT 130:56975

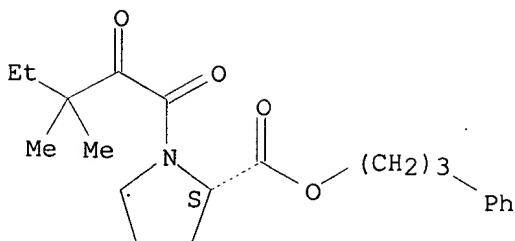
AB This invention relates to pharmaceutical compns. and methods for treating **alopecia** and promoting **hair** growth using pyrrolidine derivs. Pyrrolidine derivs. were prep'd. and used in **hair** growth formulations. A lotion contained EtOH 80.0, 3-phenyl-1-propyl(2S)-1-(3,3-dimethyl-1,2-dioxopentyl)-2-pyrrolidinecarboxylate 10.0, .alpha.-tocopherol acetate 0.01, HCO 0.5, and water 9.0% and perfume and dye qs.

ST hair growth pyrrolidine deriv prep'n  
 IT **Alopecia**

Hair growth stimulants  
 Hair lotions  
 (hair growth compns. contg. pyrrolidine derivs.)  
 IT FKB P (protein)  
 FKB P12 (protein)  
 Immunophilins  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (hair growth compns. contg. pyrrolidine derivs.)  
 IT 30273-62-2P 53560-26-2P 186268-50-8P 186268-52-0P  
**186268-56-4P 186268-57-5P 186268-59-7P**  
**186268-60-0P 186268-62-2P 186268-63-3P**  
**186268-64-4P 186268-65-5P 186268-66-6P**  
**186268-67-7P 186268-68-8P 186268-69-9P**  
**186268-70-2P 186268-71-3P 186268-72-4P**  
**186268-73-5P 186268-74-6P 186268-75-7P**  
**186268-76-8P 186452-05-1P 186452-06-2P**  
**186452-09-5P 186452-10-8P 186452-11-9P**  
**186452-12-0P 186452-14-2P 186452-15-3P**  
**186452-16-4P 186452-17-5P 186452-18-6P**  
**186452-19-7P 186452-20-0P 186452-22-2P**  
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**217308-37-7P 217308-39-9P 217308-40-2P**  
**217308-43-5P 217308-44-6P 217308-48-0P**  
 RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU  
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)  
 (hair growth compns. contg. pyrrolidine derivs.)  
 IT 86-81-7 122-97-4, 3-Phenyl-1-propanol 2133-40-6 2605-67-6  
 RL: RCT (Reactant)  
 (hair growth compns. contg. pyrrolidine derivs.)  
 IT 20329-96-8P 139419-63-9P 186268-77-9P 186268-78-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (hair growth compns. contg. pyrrolidine derivs.)  
 RE.CNT 5  
 RE  
 (1) Fujisawa Pharm Co, Ltd; EP 0423714 A 1991 HCPLUS  
 (2) Guilford Pharm, Inc; WO 9813343 A 1998 HCPLUS  
 (3) L'Oreal; EP 0519819 A 1992 HCPLUS  
 (4) Pardo, A; WO 9318736 A 1993 HCPLUS  
 (5) Proctor, P; US 5714510 A 1998 HCPLUS  
 IT 186268-50-8P 186268-52-0P 186268-56-4P  
**186268-57-5P 186268-59-7P 186268-60-0P**  
**186268-62-2P 186268-63-3P 186268-64-4P**  
**186268-65-5P 186268-66-6P 186268-67-7P**  
**186268-68-8P 186268-69-9P 186268-70-2P**  
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**217308-39-9P 217308-40-2P 217308-43-5P**  
**217308-44-6P 217308-48-0P**  
 RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU  
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)  
 (hair growth compns. contg. pyrrolidine derivs.)  
 RN 186268-50-8 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-phenylpropyl ester (9CI)  
 (CA INDEX NAME)

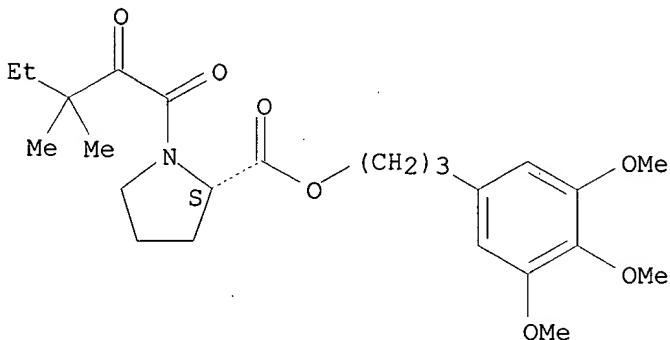
Absolute stereochemistry.

KATHLEEN FULLER EIC1700 308-4290



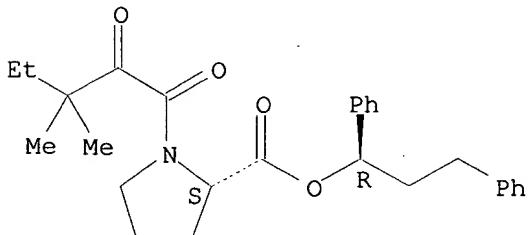
RN 186268-52-0 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3,4,5-trimethoxyphenyl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



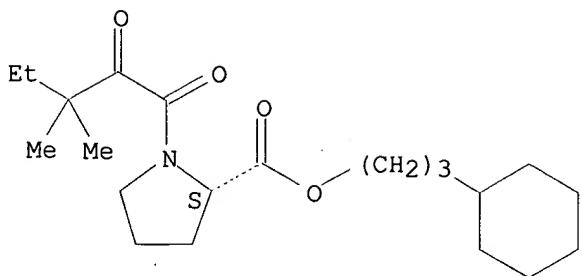
RN 186268-56-4 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1R)-1,3-diphenylpropyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 186268-57-5 HCPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-cyclohexylpropyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

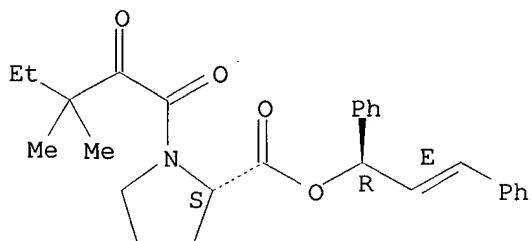


RN 186268-59-7 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1R,2E)-1,3-diphenyl-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

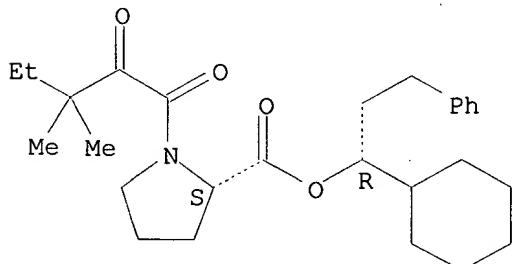
Double bond geometry as shown.



RN 186268-60-0 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1R)-1-cyclohexyl-3-phenylpropyl ester (9CI) (CA INDEX NAME)

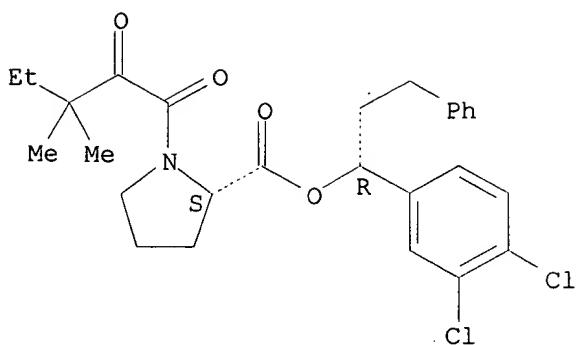
Absolute stereochemistry.



RN 186268-62-2 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1R)-1-(3,4-dichlorophenyl)-3-phenylpropyl ester (9CI) (CA INDEX NAME)

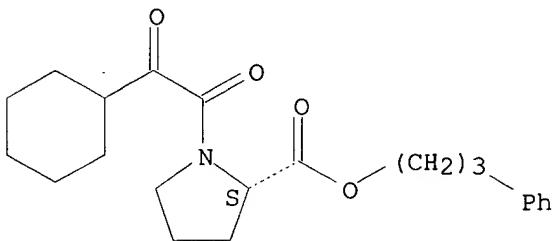
Absolute stereochemistry.



RN 186268-63-3 HCPLUS

CN L-Proline, 1-(cyclohexyloxooacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

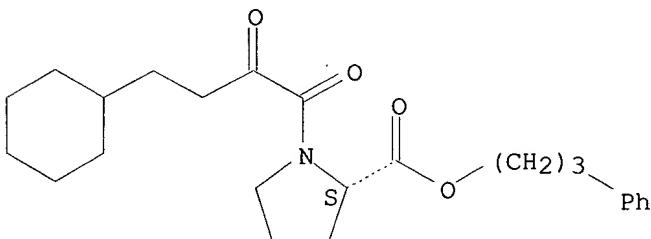
Absolute stereochemistry.



RN 186268-64-4 HCPLUS

CN L-Proline, 1-(4-cyclohexyl-1,2-dioxobutyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

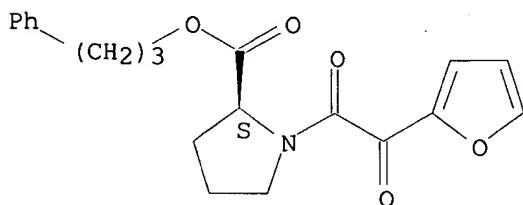
Absolute stereochemistry.



RN 186268-65-5 HCPLUS

CN L-Proline, 1-(2-furanyloxooacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

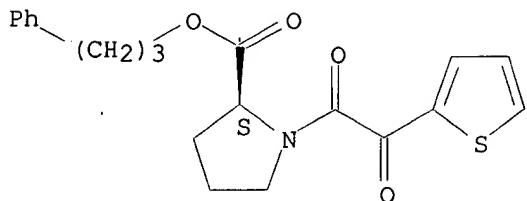
Absolute stereochemistry.



RN 186268-66-6 HCPLUS

CN L-Proline, 1-(oxo-2-thienylacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

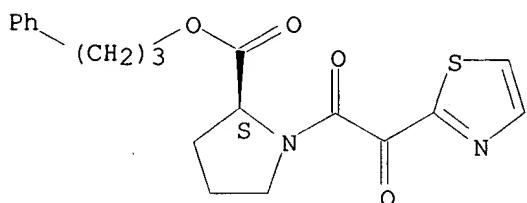
Absolute stereochemistry.



RN 186268-67-7 HCPLUS

CN L-Proline, 1-(oxo-2-thiazolylacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

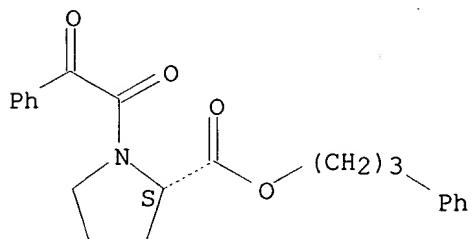
Absolute stereochemistry.



RN 186268-68-8 HCPLUS

CN L-Proline, 1-(oxophenylacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

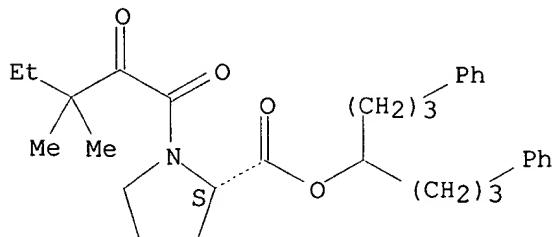
Absolute stereochemistry.



RN 186268-69-9 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 4-phenyl-1-(3-phenylpropyl)butyl ester (9CI) (CA INDEX NAME)

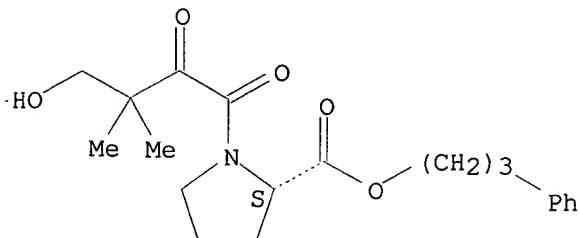
Absolute stereochemistry.



RN 186268-70-2 HCPLUS

CN L-Proline, 1-(4-hydroxy-3,3-dimethyl-1,2-dioxobutyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

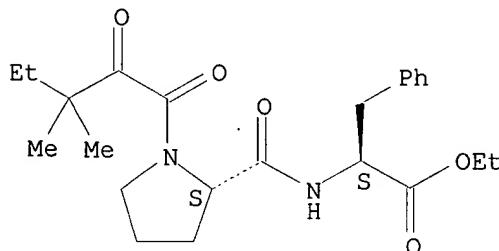
Absolute stereochemistry.



RN 186268-71-3 HCPLUS

CN L-Phenylalanine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, ethyl ester (9CI) (CA INDEX NAME)

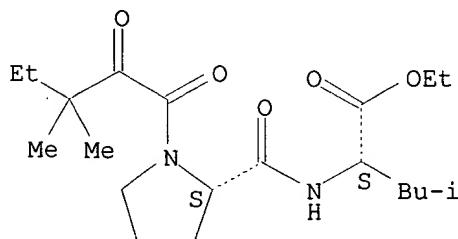
Absolute stereochemistry.



RN 186268-72-4 HCPLUS

CN L-Leucine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, ethyl ester (9CI) (CA INDEX NAME)

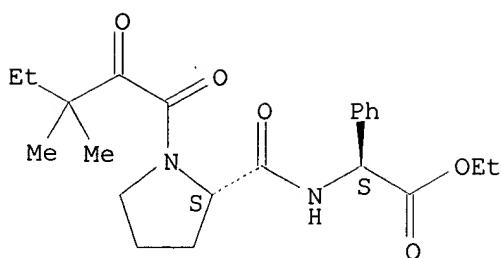
Absolute stereochemistry.



RN 186268-73-5 HCPLUS

CN Glycine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-2-phenyl-, ethyl ester, (2S)- (9CI) (CA INDEX NAME)

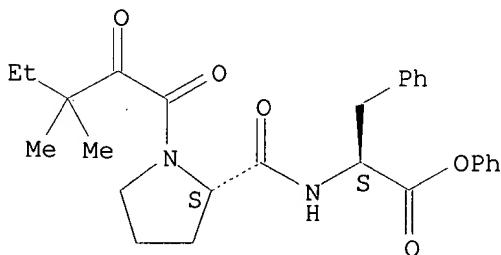
Absolute stereochemistry.



RN 186268-74-6 HCPLUS

CN L-Phenylalanine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, phenyl ester  
(9CI) (CA INDEX NAME)

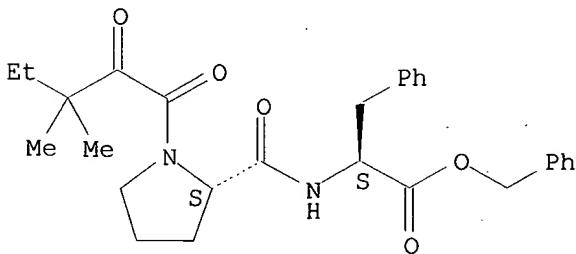
Absolute stereochemistry.



RN 186268-75-7 HCPLUS

CN L-Phenylalanine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, phenylmethyl ester  
(9CI) (CA INDEX NAME)

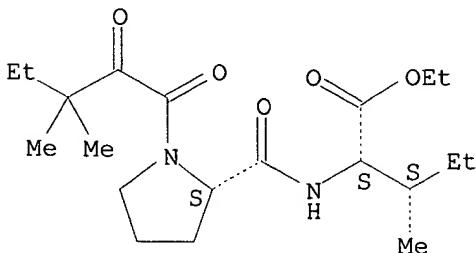
Absolute stereochemistry.



RN 186268-76-8 HCPLUS

CN L-Isoleucine, 1-(3,3-dimethyl-1,2-dioxopentyl)-L-prolyl-, ethyl ester  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

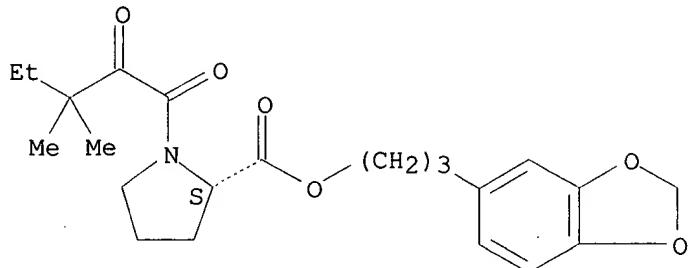


RN 186452-05-1 HCPLUS

KATHLEEN FULLER EIC1700 308-4290

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(1,3-benzodioxol-5-yl)propyl ester (9CI) (CA INDEX NAME)

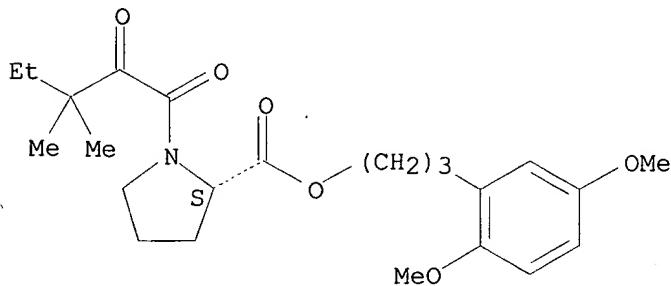
Absolute stereochemistry.



RN 186452-06-2 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(2,5-dimethoxyphenyl)propyl ester (9CI) (CA INDEX NAME)

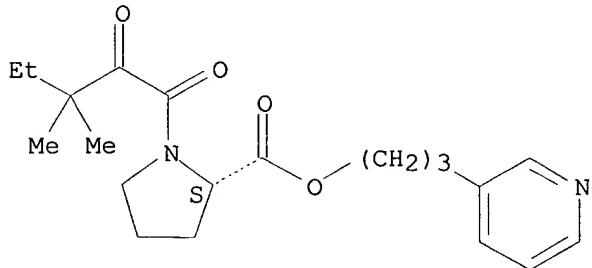
Absolute stereochemistry.



RN 186452-09-5 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3-pyridinyl)propyl ester (9CI) (CA INDEX NAME)

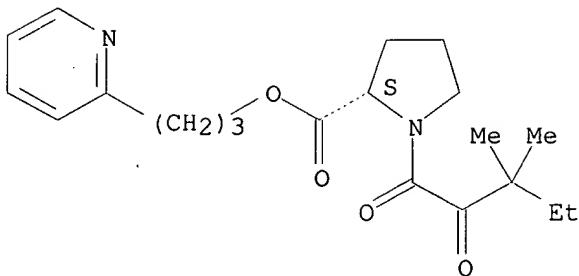
Absolute stereochemistry.



RN 186452-10-8 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(2-pyridinyl)propyl ester (9CI) (CA INDEX NAME)

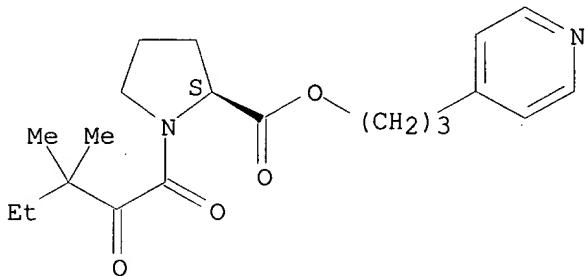
Absolute stereochemistry.



RN 186452-11-9 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(4-pyridinyl)propyl ester  
(9CI) (CA INDEX NAME)

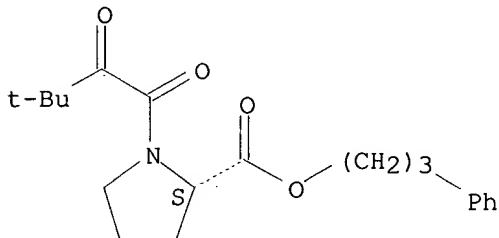
Absolute stereochemistry.



RN 186452-12-0 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxobutyl)-, 3-phenylpropyl ester (9CI)  
(CA INDEX NAME)

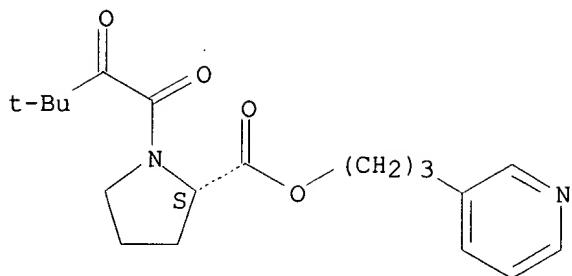
Absolute stereochemistry.



RN 186452-14-2 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxobutyl)-, 3-(3-pyridinyl)propyl ester  
(9CI) (CA INDEX NAME)

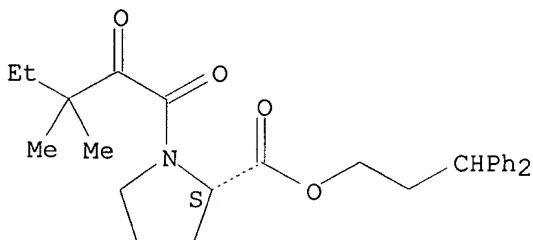
Absolute stereochemistry.



RN 186452-15-3 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3,3-diphenylpropyl ester  
(9CI) (CA INDEX NAME)

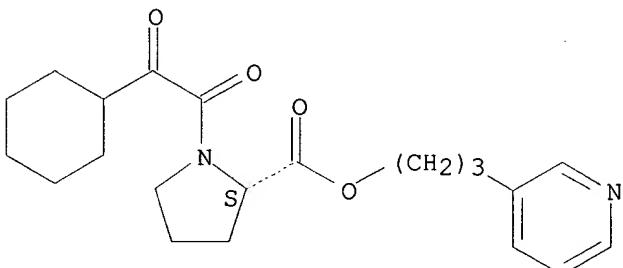
Absolute stereochemistry.



RN 186452-16-4 HCAPLUS

CN L-Proline, 1-(cyclohexyloxooacetyl)-, 3-(3-pyridinyl)propyl ester (9CI)  
(CA INDEX NAME)

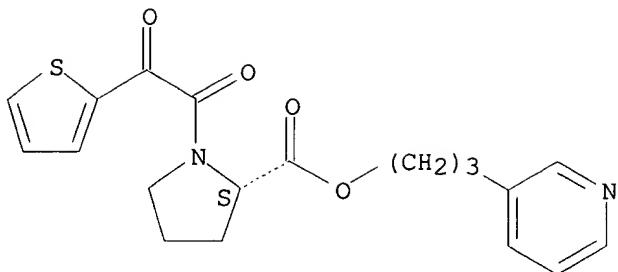
Absolute stereochemistry.



RN 186452-17-5 HCAPLUS

CN L-Proline, 1-(oxo-2-thienylacetyl)-, 3-(3-pyridinyl)propyl ester (9CI)  
(CA INDEX NAME)

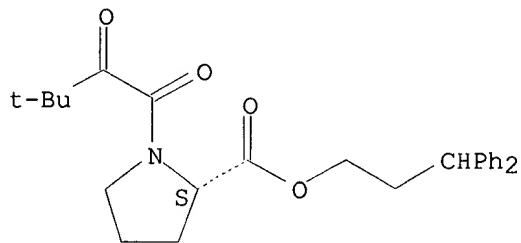
Absolute stereochemistry.



RN 186452-18-6 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxobutyl)-, 3,3-diphenylpropyl ester  
(9CI) (CA INDEX NAME)

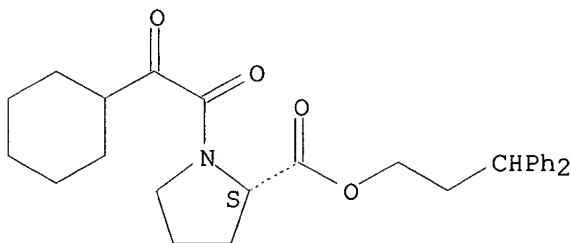
Absolute stereochemistry.



RN 186452-19-7 HCAPLUS

CN L-Proline, 1-(cyclohexyloxooacetyl)-, 3,3-diphenylpropyl ester (9CI) (CA  
INDEX NAME)

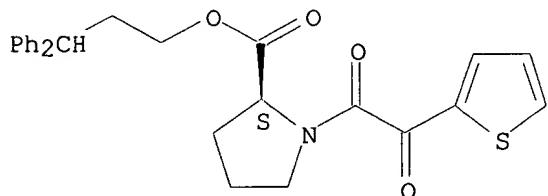
Absolute stereochemistry.



RN 186452-20-0 HCAPLUS

CN L-Proline, 1-(oxo-2-thienylacetyl)-, 3,3-diphenylpropyl ester (9CI) (CA  
INDEX NAME)

Absolute stereochemistry.

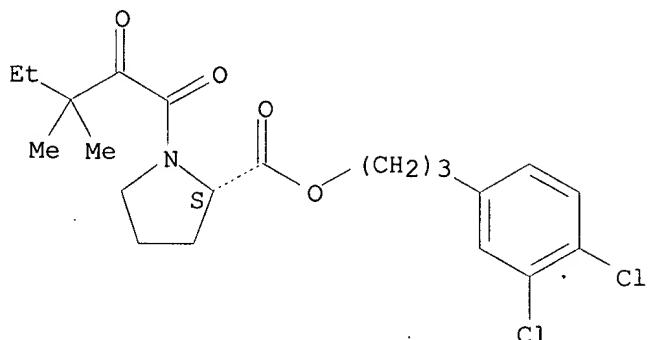


RN 186452-22-2 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3,4-dichlorophenyl)propyl  
KATHLEEN FULLER EIC1700 308-4290

ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

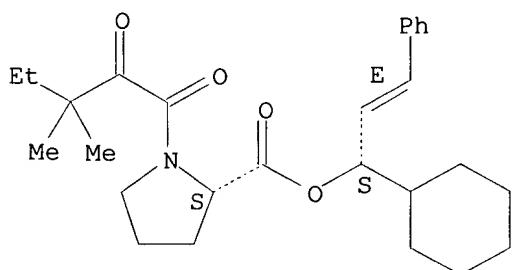


RN 186452-23-3 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1S,2E)-1-cyclohexyl-3-phenyl-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

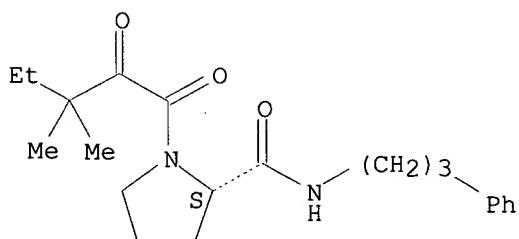
Double bond geometry as shown.



RN 186452-25-5 HCPLUS

CN 2-Pyrrolidinecarboxamide, 1-(3,3-dimethyl-1,2-dioxopentyl)-N-(3-phenylpropyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

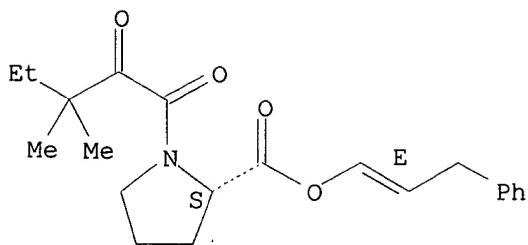


RN 217308-36-6 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1E)-3-phenyl-1-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

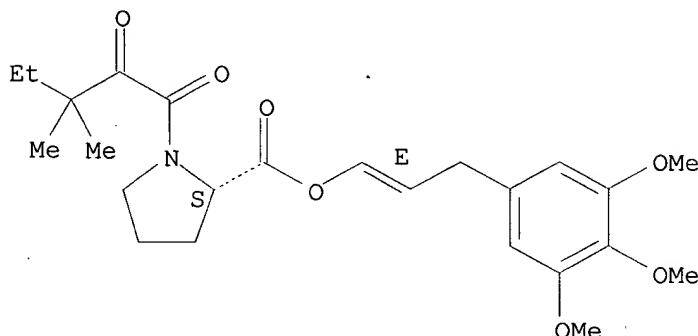


RN 217308-37-7 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1E)-3-(3,4,5-trimethoxyphenyl)-1-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

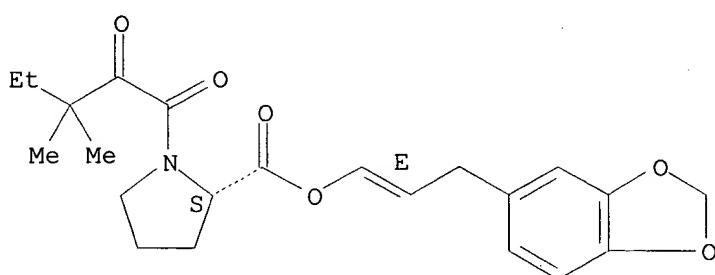


RN 217308-39-9 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1E)-3-(1,3-benzodioxol-5-yl)-1-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

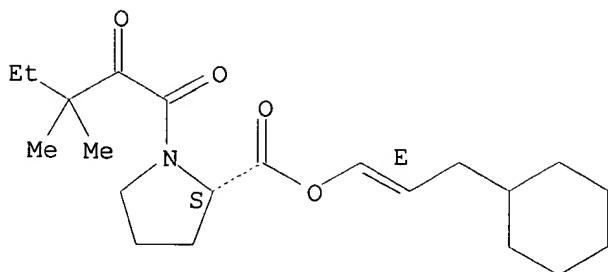


RN 217308-40-2 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1E)-3-cyclohexyl-1-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

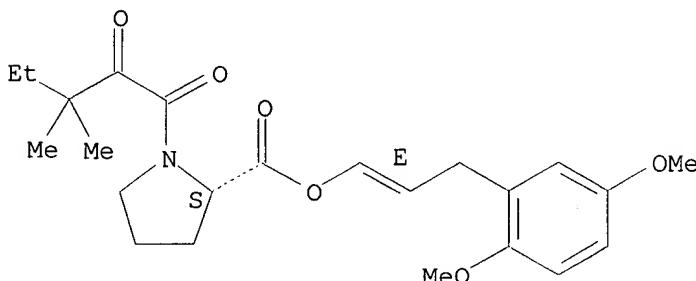
Double bond geometry as shown.



RN 217308-43-5 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1E)-3-(2,5-dimethoxyphenyl)-1-propenyl ester (9CI) (CA INDEX NAME)

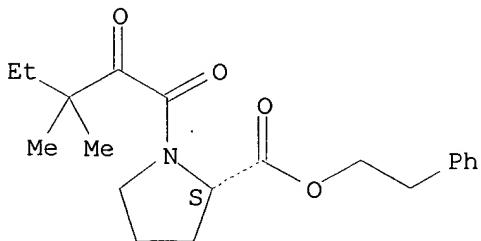
Absolute stereochemistry.  
Double bond geometry as shown.



RN 217308-44-6 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 2-phenylethyl ester (9CI)  
(CA INDEX NAME)

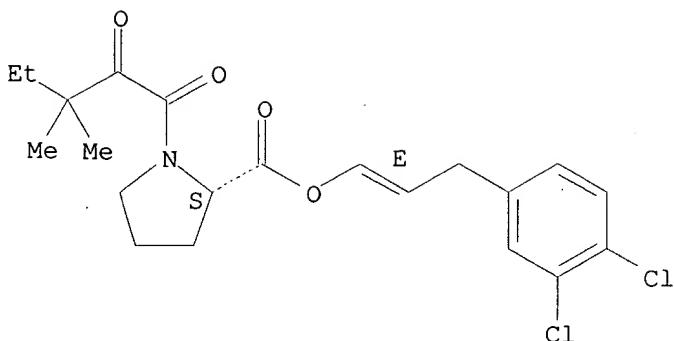
Absolute stereochemistry.



RN 217308-48-0 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1E)-3-(3,4-dichlorophenyl)-1-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.



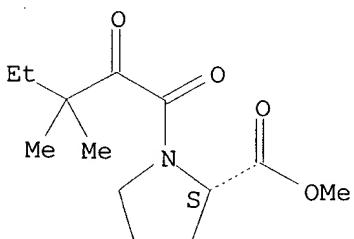
IT 186268-77-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(hair growth compns. contg. pyrrolidine derivs.)

RN 186268-77-9 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L12 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2001 ACS

AN 1998:804155 HCAPLUS

DN 130:52725

TI Preparation and use of pyrrolidines in hair growth compositions

IN Hamilton, Gregory S.; Steiner, Joseph P.

PA Guilford Pharmaceuticals Inc., USA

SO PCT Int. Appl., 187 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K007-48

CC 34-2 (Amino Acids, Peptides, and Proteins)

Section cross-reference(s): 1, 63

FAN.CNT 6

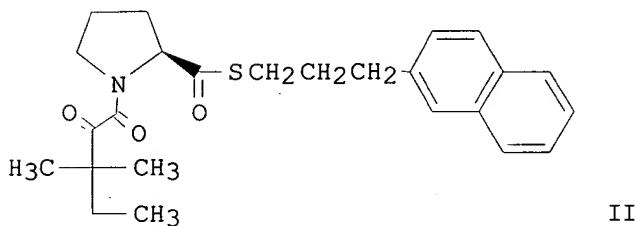
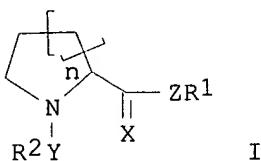
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI WO 9855090	A1	19981210	WO 1998-US11237	19980603
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
US 5945441	A	19990831	US 1997-869426	19970604
ZA 9804621	A	19981204	ZA 1998-4621	19980529
ZA 9804778	A	19981204	ZA 1998-4778	19980603

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ZA 9804783	A	19981204	ZA 1998-4783	19980603
AU 9877164	A1	19981221	AU 1998-77164	19980603
EP 983054	A1	20000308	EP 1998-925148	19980603
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 6239164	B1	20010529	US 1999-369860	19990809
PRAI US 1997-869426	A	19970604		
WO 1998-US11237	W	19980603		

GI



AB This invention relates to pharmaceutical compns. and methods for treating **alopecia** and promoting **hair** growth using non-immunosuppressive neuroimmunophilin FKBP ligands [I; n = 1, 2, 3; Y = CO, COCO, SO2, CS; X = O, S; Z = S, O, CH2, (CH2)3, SCH2, S(CH2)2, S(CH2)3; R1 = benzyl, 3-phenylpropyl, 3-(3-pyridyl)propyl, diphenylmethyl, etc.; R2 = cyclohexyl, Ph, tert-Bu, 3,4,5-trimethoxyphenyl, etc.], stereoisomers, pharmaceutically acceptable salts, esters, and solvates thereof. The title compd. II was tested, in vitro, in inhibition of the peptidyl-prolyl isomerase activity and preferably for use topically to the skin to treat **alopecia** or promote **hair** growth effectively.

ST carboxylate pyrrolidine prep **alopecia** treatment

IT **Alopecia**

Drug delivery systems

(prep. and use of pyrrolidines in **hair** growth compns.)

IT 186452-09-5P

RL: BAC (Biological activity or effector, except adverse); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prep. and use of pyrrolidines in **hair** growth compns.)

IT 186268-50-8P 186268-51-9P 186268-52-0P

186268-53-1P 186268-54-2P 186268-56-4P

186268-57-5P 186268-58-6P 186268-63-3P

186268-64-4P 186268-65-5P 186268-66-6P

186268-67-7P 186268-68-8P 186452-05-1P

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186452-10-8P 186452-11-9P 186452-12-0P

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KATHLEEN FULLER EIC1700 308-4290

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 217186-56-6P 217186-57-7P 217186-58-8P

RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. and use of pyrrolidines in hair growth compns.)

IT 86-81-7, 3,4,5-Trimethoxybenzaldehyde 96-15-1, 2-Methylbutylamine  
 103-63-9, 2-(Bromoethyl)benzene 108-98-5, Phenyl mercaptan, reactions  
 122-97-4, 3-Phenyl-1-propanol 558-13-4, Carbontetrabromide 955-40-8  
 1122-82-3, Cyclohexylisothiocyanate 2577-48-2, L-Proline methyl ester  
 2859-67-8, 3-Pyridinepropanol 4830-93-7, 1-Chloro-4-phenylbutane  
 5406-18-8, 3-(p-Methoxyphenyl)-1-propanol 5781-53-3, Methyloxalyl  
 chloride 20329-96-8, Methyl (E)-3,4,5-Trimethoxycinnamate 26250-84-0  
 28276-08-6, 1,1-Dimethylpropylmagnesium chloride 32559-18-5, Methyl  
 pipecolate hydrochloride 34592-47-7 53560-26-2

RL: RCT (Reactant)

(prepn. and use of pyrrolidines in hair growth compns.)

IT 104-53-0P, 3-Phenyl-1-propanal 17486-86-1P, 1,5-Diphenyl-3-pentanol  
 21011-66-5P 57293-19-3P 69603-49-2P, 3-Pyridinepropanethiol  
 88537-44-4P 89113-44-0P 139419-63-9P **186268-77-9P**  
 186268-78-0P 205388-66-5P 205388-67-6P 205388-68-7P 205448-82-4P  
 210048-37-6P 210048-38-7P 210103-98-3P 210103-99-4P 217186-09-9P  
 217186-59-9P 217186-60-2P 217186-61-3P 217186-62-4P 217186-63-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)

(prepn. and use of pyrrolidines in hair growth compns.)

RE.CNT 3

RE

- (1) Ariad Gene Therapeutics, Inc; WO 9731898 A 1997 HCPLUS
- (2) Hamilton, G; US 5614547 A 1997 HCPLUS
- (3) The Board of Trustees of the Leland Stanford Junior Univ; WO 9502684 A 1995 HCPLUS

IT **186452-09-5P**

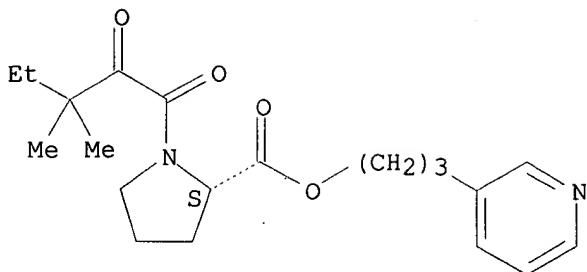
RL: BAC (Biological activity or effector, except adverse); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. and use of pyrrolidines in hair growth compns.)

RN 186452-09-5 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3-pyridinyl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 186268-50-8P 186268-51-9P 186268-52-0P  
 186268-53-1P 186268-54-2P 186268-56-4P  
 186268-57-5P 186268-58-6P 186268-63-3P  
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 186452-10-8P 186452-11-9P 186452-12-0P  
 186452-13-1P 186452-14-2P 186452-15-3P  
 186452-16-4P 186452-17-5P 186452-18-6P  
**186452-19-7P 186452-20-0P 212762-79-3P**

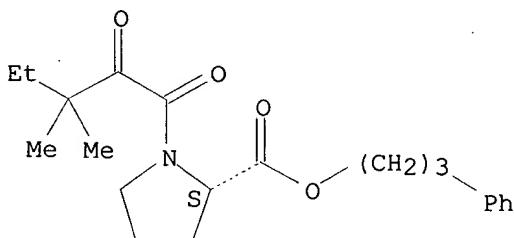
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. and use of pyrrolidines in hair growth compns.)

RN 186268-50-8 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-phenylpropyl ester (9CI)  
 (CA INDEX NAME)

Absolute stereochemistry.

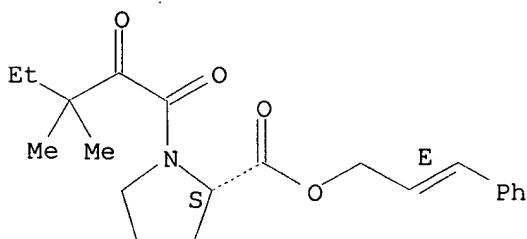


RN 186268-51-9 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-phenyl-2-propenyl ester (9CI)  
 (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

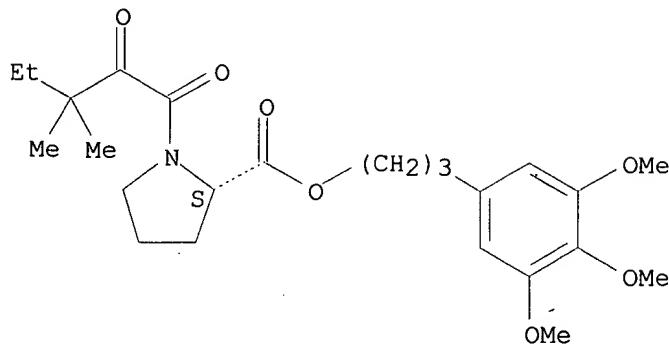


RN 186268-52-0 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3,4,5-  
 KATHLEEN FULLER EIC1700 308-4290

trimethoxyphenyl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

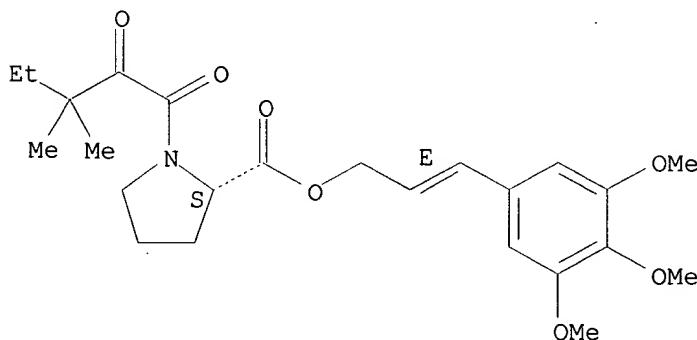


RN 186268-53-1 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-(3,4,5-trimethoxyphenyl)-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

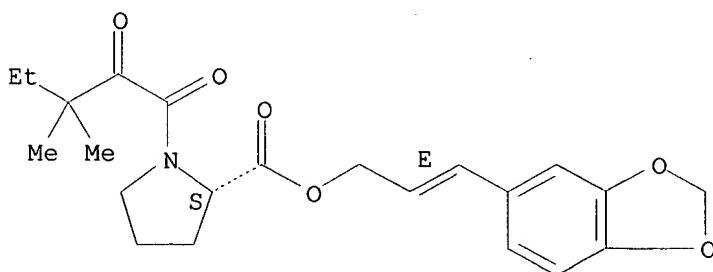


RN 186268-54-2 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-(1,3-benzodioxol-5-yl)-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

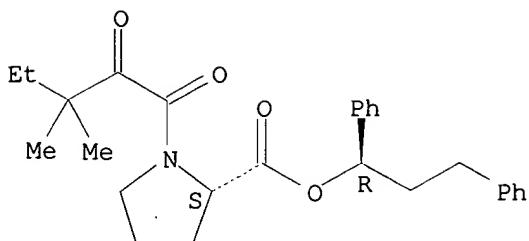
Double bond geometry as shown.



RN 186268-56-4 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (1R)-1,3-diphenylpropyl ester (9CI) (CA INDEX NAME)

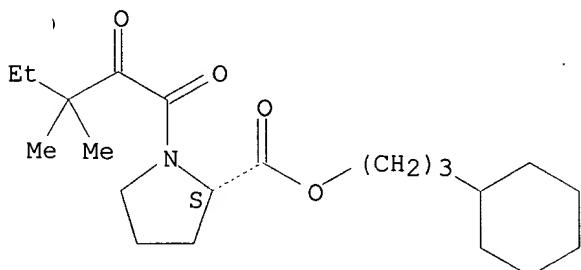
Absolute stereochemistry.



RN 186268-57-5 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-cyclohexylpropyl ester  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

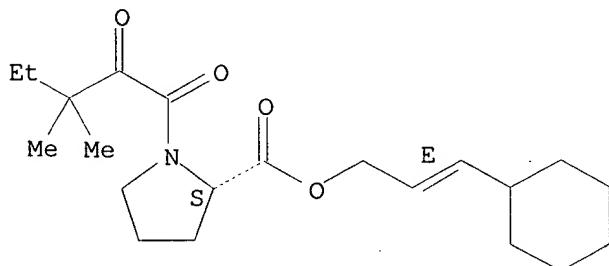


RN 186268-58-6 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-cyclohexyl-2-propenyl  
ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

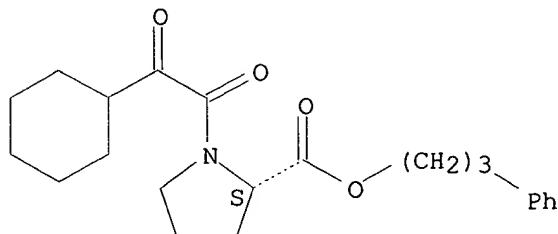
Double bond geometry as shown.



RN 186268-63-3 HCPLUS

CN L-Proline, 1-(cyclohexyloxooacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX  
NAME)

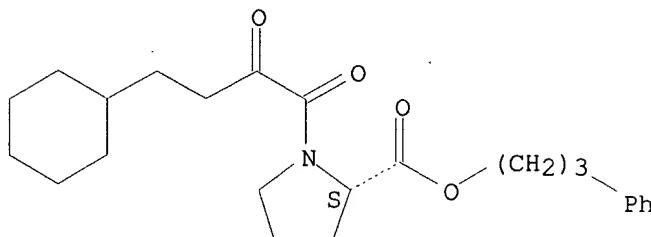
Absolute stereochemistry.



RN 186268-64-4 HCAPLUS

CN L-Proline, 1-(4-cyclohexyl-1,2-dioxobutyl)-, 3-phenylpropyl ester (9CI)  
(CA INDEX NAME)

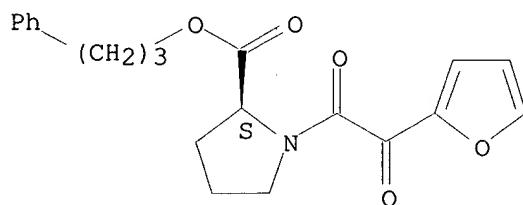
Absolute stereochemistry.



RN 186268-65-5 HCAPLUS

CN L-Proline, 1-(2-furanyloxooacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

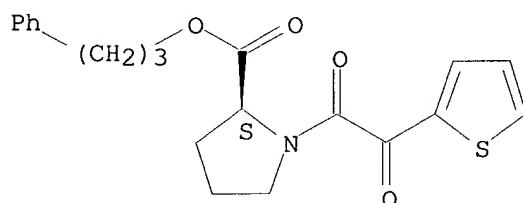
Absolute stereochemistry.



RN 186268-66-6 HCAPLUS

CN L-Proline, 1-(oxo-2-thienylacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

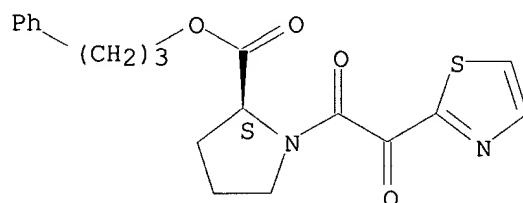
Absolute stereochemistry.



RN 186268-67-7 HCAPLUS

CN L-Proline, 1-(oxo-2-thiazolylacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

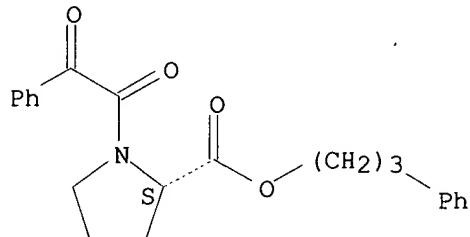


RN 186268-68-8 HCAPLUS

KATHLEEN FULLER EIC1700 308-4290

CN L-Proline, 1-(oxophenylacetyl)-, 3-phenylpropyl ester (9CI) (CA INDEX NAME)

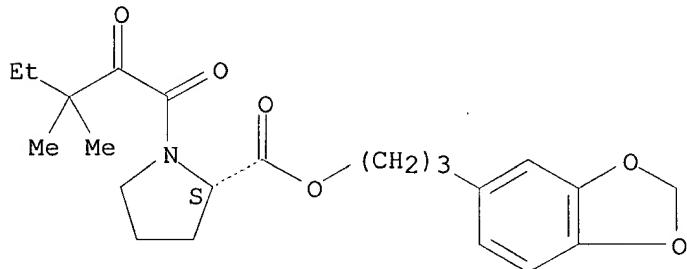
Absolute stereochemistry.



RN 186452-05-1 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(1,3-benzodioxol-5-yl)propyl ester (9CI) (CA INDEX NAME)

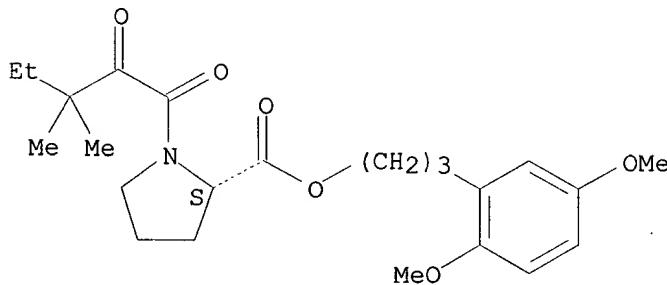
Absolute stereochemistry.



RN 186452-06-2 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(2,5-dimethoxyphenyl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

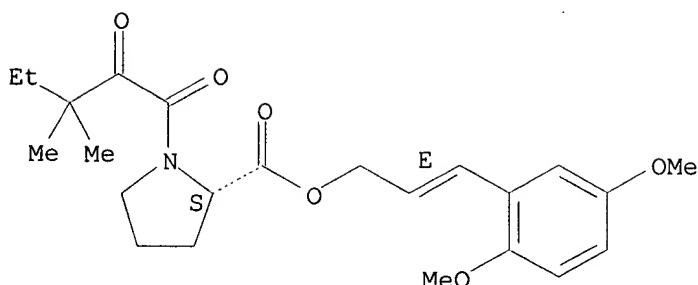


RN 186452-07-3 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, (2E)-3-(2,5-dimethoxyphenyl)-2-propenyl ester (9CI) (CA INDEX NAME)

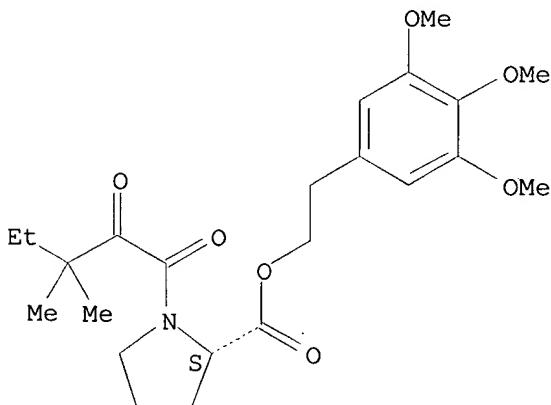
Absolute stereochemistry.

Double bond geometry as shown.



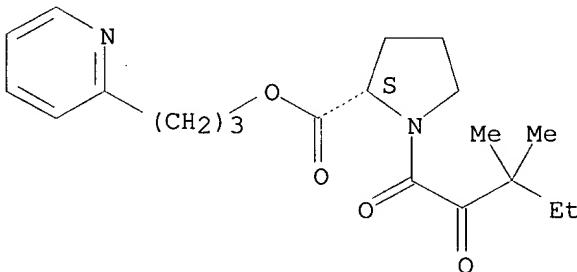
RN 186452-08-4 HCAPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 2-(3,4,5-trimethoxyphenyl)ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



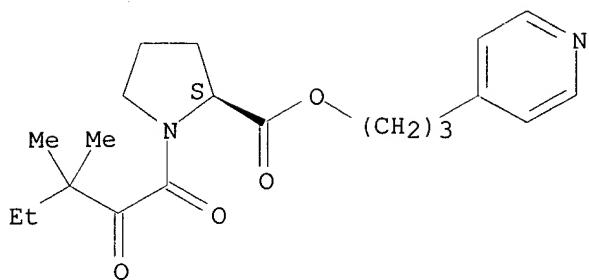
RN 186452-10-8 HCAPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(2-pyridinyl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 186452-11-9 HCAPLUS  
 CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(4-pyridinyl)propyl ester (9CI) (CA INDEX NAME)

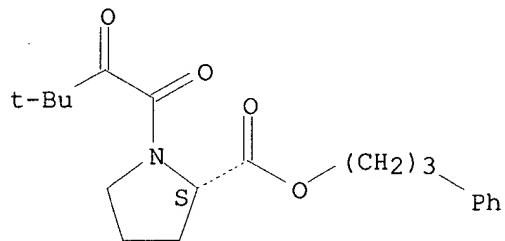
Absolute stereochemistry.



RN 186452-12-0 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxobutyl)-, 3-phenylpropyl ester (9CI)  
(CA INDEX NAME)

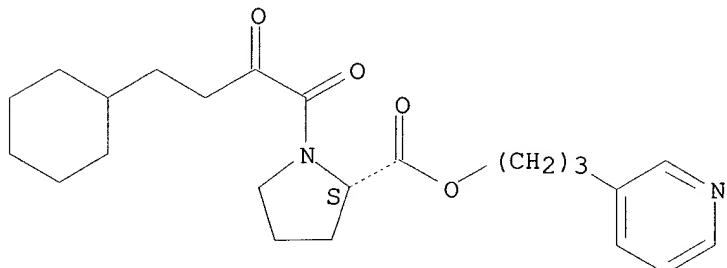
Absolute stereochemistry.



RN 186452-13-1 HCAPLUS

CN L-Proline, 1-(4-cyclohexyl-1,2-dioxobutyl)-, 3-(3-pyridinyl)propyl ester  
(9CI) (CA INDEX NAME)

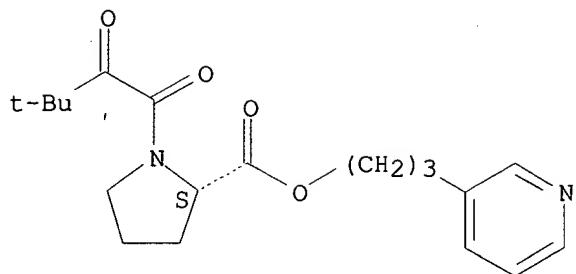
Absolute stereochemistry.



RN 186452-14-2 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxobutyl)-, 3-(3-pyridinyl)propyl ester  
(9CI) (CA INDEX NAME)

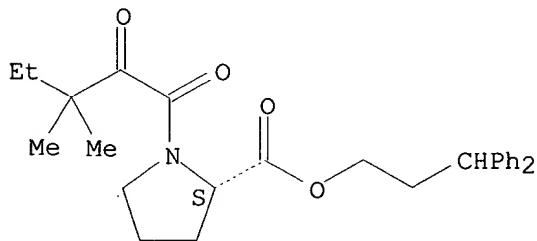
Absolute stereochemistry.



RN 186452-15-3 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3,3-diphenylpropyl ester  
(9CI) (CA INDEX NAME)

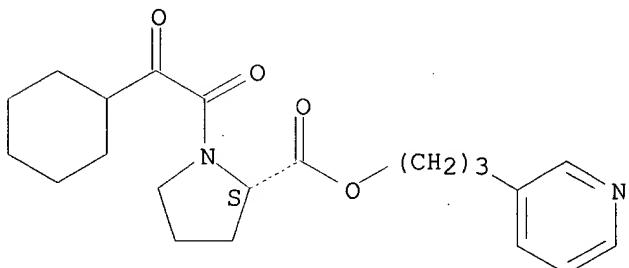
Absolute stereochemistry.



RN 186452-16-4 HCAPLUS

CN L-Proline, 1-(cyclohexyloxooacetyl)-, 3-(3-pyridinyl)propyl ester (9CI)  
(CA INDEX NAME)

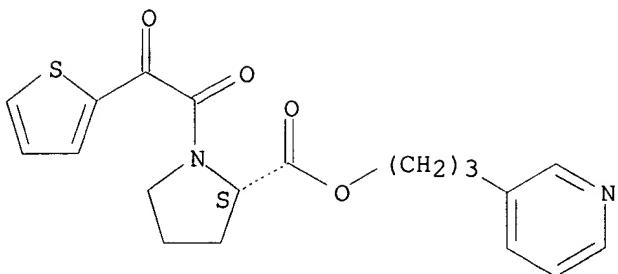
Absolute stereochemistry.



RN 186452-17-5 HCAPLUS

CN L-Proline, 1-(oxo-2-thienylacetyl)-, 3-(3-pyridinyl)propyl ester (9CI)  
(CA INDEX NAME)

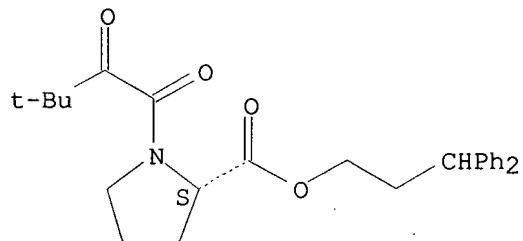
Absolute stereochemistry.



RN 186452-18-6 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxobutyl)-, 3,3-diphenylpropyl ester  
(9CI) (CA INDEX NAME)

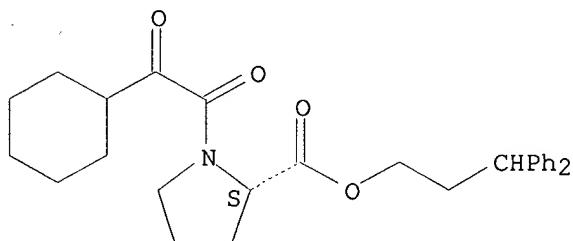
Absolute stereochemistry.



RN 186452-19-7 HCAPLUS

CN L-Proline, 1-(cyclohexyloxooacetyl)-, 3,3-diphenylpropyl ester (9CI) (CA  
INDEX NAME)

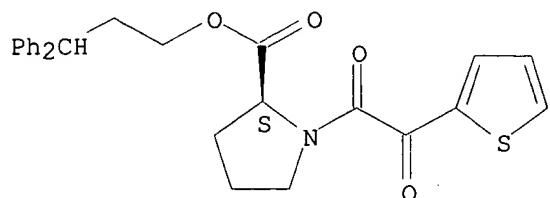
Absolute stereochemistry.



RN 186452-20-0 HCAPLUS

CN L-Proline, 1-(oxo-2-thienylacetyl)-, 3,3-diphenylpropyl ester (9CI) (CA  
INDEX NAME)

Absolute stereochemistry.

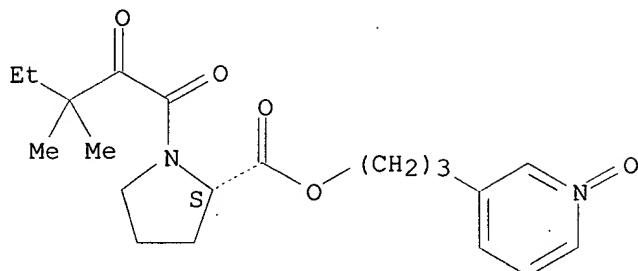


RN 212762-79-3 HCAPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(1-oxido-3-  
KATHLEEN FULLER EIC1700 308-4290

pyridinyl)propyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



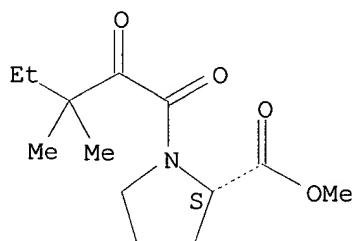
IT 186268-77-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and use of pyrrolidines in hair growth compns.)

RN 186268-77-9 HCPLUS

CN L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L12 ANSWER 14 OF 14 HCPLUS COPYRIGHT 2001 ACS

AN 1993:213513 HCPLUS

DN 118:213513

TI **Oxalopeptides** as core motifs for protein design

AU Ranganathan, Darshan; Vaish, Narendra K.; Shah, Kavita; Roy, Raja;  
Madhusudanan, K. P.

CS Dep. Chem., Indian Inst. Technol., Kanpur, 208 016, India

SO J. Chem. Soc., Chem. Commun. (1993), (1), 92-4

CODEN: JCCCAT; ISSN: 0022-4936

DT Journal

LA English

CC 34-3 (Amino Acids, Peptides, and Proteins)

Section cross-reference(s): 6

AB **Oxalopeptides** are demonstrated to be useful core motifs for bi-directional chain elongation leading to peptide homologs with interesting folding behavior, thus constituting a useful strategy for protein backbone modification.

ST **oxalopeptide** core motif protein design; peptide oxalo core motif protein design

IT Proteins, preparation

RL: PREP (Preparation)

(design of, **oxalopeptides** as core motifs for)

IT Conformation and Conformers

(of **oxalopeptides**)

IT Peptides, preparation

RL: SPN (Synthetic preparation); PREP (Preparation)

(oxalo, prepn. of, as core motifs for protein design)

KATHLEEN FULLER EIC1700 308-4290

IT 79-37-8, Oxalyl chloride  
 RL: RCT (Reactant)  
 (acylation by, of amino acid Me esters)

IT 2133-40-6, Proline methyl ester hydrochloride 2491-18-1, Methionine methyl ester hydrochloride 2491-20-5, Alanine methyl ester hydrochloride 3417-91-2, Tyrosine methyl ester hydrochloride 5680-79-5, Glycine methyl ester hydrochloride 7517-19-3, Leucine methyl ester hydrochloride 7524-50-7 7524-52-9 15028-41-8, .alpha.-Amino isobutyric acid methyl ester hydrochloride 27894-50-4  
 RL: RCT (Reactant)  
 (acylation of, with oxalyl chloride)

IT 616-34-2, Glycine methyl ester  
 RL: RCT (Reactant)  
 (peptide coupling of, with **oxalopeptide**)

IT 10065-72-2, Alanine methyl ester  
 RL: RCT (Reactant)  
 (peptide coupling of, with **oxalopeptide** hydrazide)

IT 147315-22-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and peptide coupling of, with amino acid Me esters)

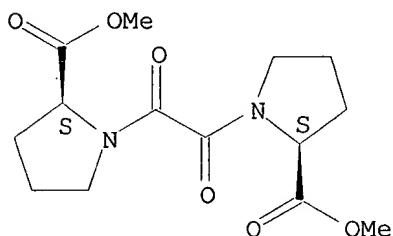
IT 147315-06-8P 147315-07-9P 147315-08-0P 147315-09-1P 147315-10-4P  
 147315-11-5P 147315-12-6P 147315-13-7P 147315-14-8P 147315-20-6P  
 147315-21-7P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

IT 13673-70-6P 90197-99-2P 101508-69-4P 105206-97-1P  
 144901-96-2P 147315-15-9P 147315-16-0P 147315-17-1P 147315-18-2P  
 147315-19-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of, as core motif for bi-directional chain elongation)

IT 13673-70-6P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of, as core motif for bi-directional chain elongation)

RN 13673-70-6 HCPLUS  
 CN L-Proline, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis-, dimethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> file reg

FILE 'REGISTRY' ENTERED AT 09:23:40 ON 26 JUN 2001  
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 DICTIONARY FILE UPDATES: 25 JUN 2001 HIGHEST RN 343304-93-8

TSCA INFORMATION NOW CURRENT THROUGH January 11, 2001

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conducting SmartSELECT searches.

Structure search limits have been increased. See HELP SLIMIT for details.

=> d que

L13 1 SEA FILE=REGISTRY ABB=ON 13673-70-6

=> d

L13 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2001 ACS

RN 13673-70-6 REGISTRY

CN L-Proline, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis-, dimethyl ester (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Proline, 1,1'-oxalyldi-, dimethyl ester, L- (8CI)

OTHER NAMES:

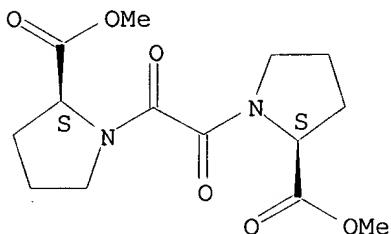
CN (S)-1,1'-Oxalyldi-2-pyrrolidinecarboxylic acid dimethyl ester

FS STEREOSEARCH

MF C14 H20 N2 O6

LC STN Files: BEILSTEIN\*, CA, CAPLUS, TOXLIT  
(\*File contains numerically searchable property data)

Absolute stereochemistry.



6 REFERENCES IN FILE CA (1967 TO DATE)

6 REFERENCES IN FILE CAPLUS (1967 TO DATE)